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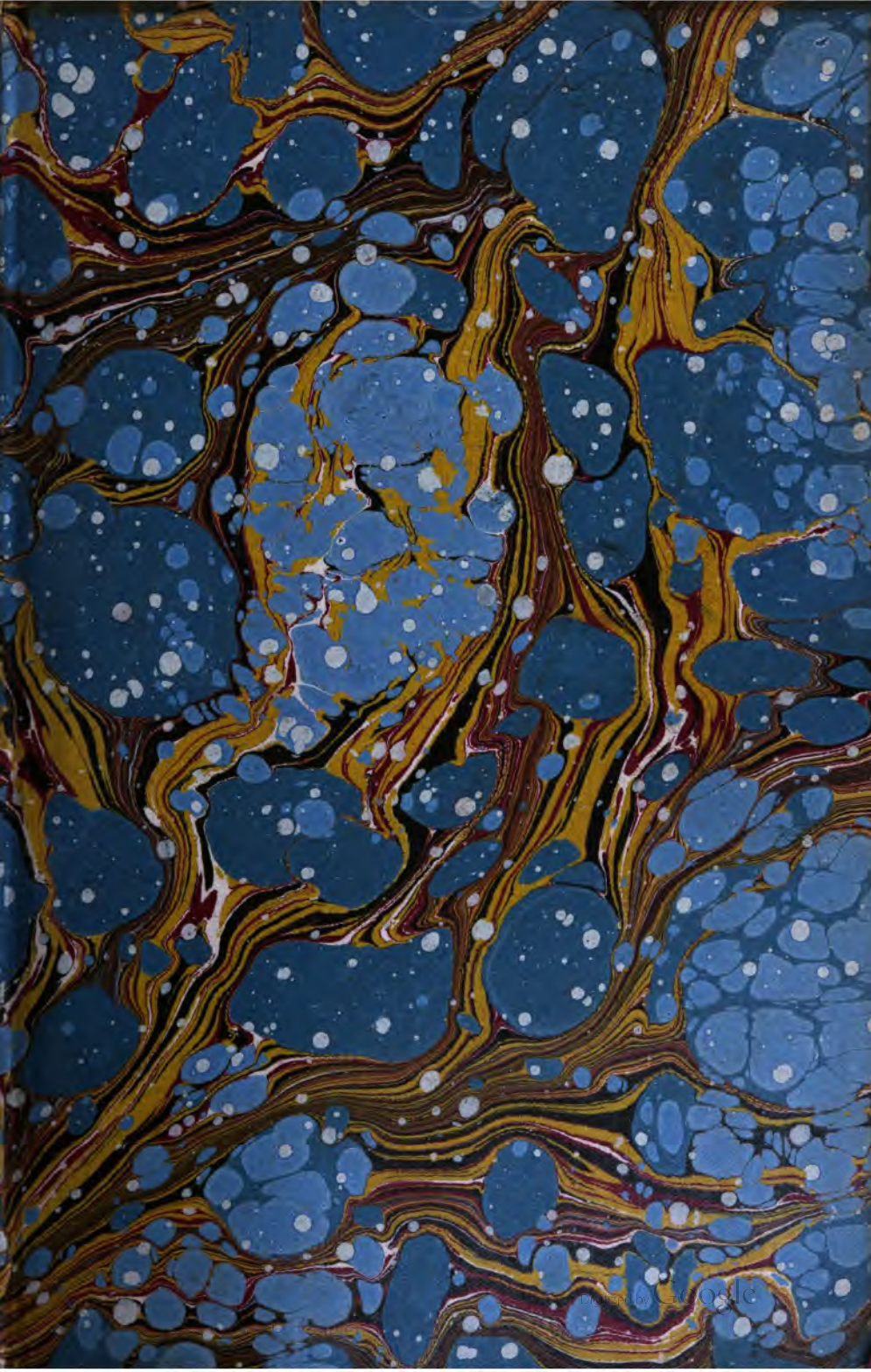
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# Grevillea,

A QUARTERLY RECORD OF  
CRYPTOGAMIC BOTANY  
AND ITS LITERATURE

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EDITED BY M. C. COOKE, M.A., A.L.S.,

*Author of "Handbook of British Fungi," "Fungi, their uses," &c.,  
"Rust, Smut, Mildew, and Mould," &c., &c.*

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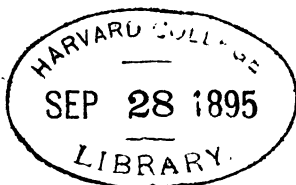
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# Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY  
AND ITS LITERATURE.

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## FUNGI OF PERAK.

By M. C. COOKE.

This collection was made under the superintendence of Dr. Geo. King, of the Calcutta Botanic Garden.

**Lentinus exilis**, *Klotsch.*

**Lentinus dactylophorus**, *Lev.*

**Lenzites platyphyllus**, *Cooke.*

Pileo subreniformi (vel orbiculari) suberoso, albido, postice lato (vel centro), affixi, subtiliter velutino, præcipue margine radiato-sulcato, dein striato, contextu concolore tenui (2 mm.) lamellis subdistantibus, latissimis (1 unc.) furcatis, ochroleucis.

On rotten wood. Goping. Malay Peninsula. Aug., 1840. (No. 607.)

Pileus from 2 to 6 inches broad. Size and habit of *L. ochrophyllus*, B., but gills more distant, much broader, and the pileus distinctly radiato-sulcate, or striate. The mycelium, running under the bark, is of a bright orange colour.

**Lenzites applanata**, *Fries.*

**Polyporus (Melanopus) hemicapnodes**, *Berk., var. dimorphus.*

Pileo coriaceo-membranaceo lento quandoque infundibuliformi, alias reniformi, vel lobato, vel fissurato, pallido vel ochroleuco, subtiliter striatulo, initio leniter sericeo, demum glabrescente. Stipite centrali, lateralive, gracili, erecto, basi discoide, nigro-velutino, sicco rugoso; hymenio albido, poris parce decurrentibus, rotundis, aequalibus, minutis ( $\frac{1}{8}$  mm. diam.).

On dead logs. Goping. Malay Peninsula. (No 665.)

Pileus scarcely exceeding 1 in. diam. Stem about the same length, 1 line thick. It is evidently allied to *P. Leprieurii*, but differs in several important points. The pileus is sometimes infundibuliform, or discoid, with the stem central, but more usually reniform, with the stem lateral. The pilei of two or three specimens are sometimes confluent.

**Polyporus (Mesopus) rugosus, Nees.**

**Polyporus (Mesopus) xanthopus, Fries.**

**Polyporus (Pleuropus) flabelliformis, Kl.**

**Polyporus (Pleuropus) affinis, Nees.**

**Polyporus (Pleuropus) sanguineus, Fries.**

**Polyporus (Pleuropus) incurvus, Cooke.**

Carnosus, demum cartilagineus, rigidus tenuis stipitatus. Pileo semi-orbiculari vel reniformi, repetito purpureo-zonato, ruguloso, pruinoso, albido, margine acuto inflexo, crispato-lobato, stipite laterali brevi vel elongato ruguloso, concolori, hymenio concavo pallido. Poris minutis subæqualibus, rotundatis  $\frac{1}{8}$ - $\frac{1}{2}$  mm. Dissepimentis tenuibus.

On rotten logs. Goping. Malay Peninsula. (No. 610.)

Pileus  $2\frac{1}{2} \times 2$  in. Stem 2-3 in. long,  $\frac{1}{4}$  in. thick. Strongly resembling pale forms of *Poly. zonalis*, Berk., but with a distinct and often long lateral stem.

**Polyporus (Placodermel) cornubovis, Cooke.**

Maximus, lignoso-suberosus, induratus, imbricatus, nigrescens. Pileis dimidiatis postice confluentibus, decurrentibus, concentrice sulcato-zonatis, glabris, margine tenui acuto. Contextu fibroso tenui atro-purpureo. Hymenio atro-fuligineo, sæpe glaucescente, poris minutissimis rotundis æqualibus ( $\frac{1}{8}$  mm.) elongatis. *Polyporus phæus*, Berk. in Herb. No. 2666.

On rotten logs. Goping. Malay Peninsula.

Masses from 1 to 2 feet in breadth, pilei 6-8 inches long, scarcely exceeding half an inch thick behind, very hard, shining when cut like "buffalo-horn." Berkeley's specimen was from Khasia (India). The specific name being preoccupied, has been changed as above.

**Polyporus (Placodermel) senex, Berk. & Mont.**

**Polyporus (Placodermel) introstuppeus, Berk. & Cooke in Herb. Berk. 2571\*.**

Pileo unguolato, crasso glabro, remote concentrice sulcato, tuberculato, e fuligineo demum canescente, intus stuposo-molli pallido lignicolori, cute crassa dura, margine obtuso pallidiore, hymenio ochraceo, tubulis elongatis stratosi, poris rotundatis minimis æqualibus ( $\frac{1}{4}$  mm.) dissepimentis crassis obtusis.

On trees in open jungle. Perak. (No. 587.) And on walnut. N.W. India,

Pileus from 8 to 12 in. broad, 6-9 inches long, 5 inches thick, allied to *P. scansilis*, B. and P., *P. pinicola*, Fr.

**Polyporus (Placodermel) australis, Fries.**

**Polyporus (Placodermel) kermes, Berk.**

**Polyporus (Placodermel) Auberianus, Mont.**

**Polyporus (Placodermel) Thwaitesii, Berk. & Br.**

**Polyporus (Polystictus) arenosus, Cooke.**

Pileo subtenui rigido, zonato, lineato-rugoso, antice pallido, lignicolori, postice atro-purpureo, plerumque discoideo-affixo;

hymenio pallido, poris mediis rotundatis, subæqualibus ( $\frac{1}{4}$  mm. diam.) granulis arenarum involventibus; contextu umbrino.

On logs laying on sandy ground. Goping. Malay Peninsula. Aug., 1880.

Pileus 2-3 in. broad, 1-2 lines thick. Externally very similar to *Polyporus Parishii*, Berk, but differing in its decided brown substance, and in the hymenium enclosing particles of sand in the process of growth, which characterized the whole of some twenty specimens.

**Polyporus (Inodermei) caliginosus**, *Cesati, viz Berk.*

**Polyporus (Inodermei) cingulatus**, *Berk. non Fries.*

**Polyporus (Inodermei) aratus**, *Berk.*

**Polyporus (Inodermei) cinerascens**, *Fries.*

**Polyporus (Inodermei) brunneo-pictus**, *Berk.*

**Polyporus (Inodermei) hirsutus**, *Fries.*

**Polyporus (Inodermei) substygius**, *B. & Br.*

**Polyporus (Inodermei) submembranaceus**, *Berk.*

**Trametes rigida**, *Berk.*

**Trametes occidentalis**, *Fries.*

**Dædalea sanguinea**, *Klotsch.*

**Favolus scaber**, *B. & Br.*

**Hexagona tenuis**, *Berk.*

**Beccaria insignis**, *Cesati.*

**Gladoderris dendritica**, *Pers.*

**Gladoderris spongiosa**, *Fries.*

**Stereum Mellisii**, *Berk.*

**Stereum lobatum**, *Kunze.*

**Stereum aterrimum**, *Cooke.*

Rigido-coriaceum, ambienti-liberum, nigrum. Pileo semi-circulari, sublobato, flexuosoque, concentrice sulcato-zonato, glabrescente, contextu nigro-fusco, nigro-purpureo vergente; hymenio glabro, atro-fuligineo, pruinoso, demum nigrescente.

On rotten wood in open dry ground. Goping. Malay Peninsula. Aug., 1860. (*H. Kunstler.*)

Allied to *S. princeps* and *S. scytale*. Pileus 2 to 3 inches broad, very rigid, but fragile, 1 mm. thick and upwards. Substance purplish black. The pilei are often more or less connate at the base in a thick irregular common stem.

**Stereum involutum**, *Klotsch.*

**Guopinia flabellata**, *Cooke.*

Cæspitosa, flabellata, rubrofusca, postice attenuata, discoideo-affixa. stipite proprio nullo, pileo margine lobato inciso, hinc illic profunde diviso, utrinque glabro, hymenio subpallidiori.

On rotten logs. Goping. Malay Peninsula. (No. 646.)

Pileus 2-2 $\frac{1}{2}$  in. long, 1 $\frac{1}{2}$ -2 inches broad. Attenuated downwards to the discoid base. Thinner than *G. helvelloides*.

**Hypoxylon (Daldinia) concentricum**, *Grev.*

**Phoma Camilleae, Cke.**

Hypophylla. Peritheciis sparsis minutia, membranaceis (vix .1 mm.) poro pertusis. Sporis ellipticis, nucleis binis magnis repletis (.01 × .005 mm.).

On leaves of *Camillea thea*. Johore.

**Sphaerella (Laetadia) Camilleae, Cke.**

Epiphylla, sparsa. Peritheciis semi-immersis, membranaceis (.25 mm. diam.) atrofusis. Ascis clavatis octosporis. Sporidiis biserialibus ellipticis, continuis (.012 × .005 mm.) pallidis, hyalinis.

On leaves of *Camillea thea*. Johore.

Both of the above together on the same leaves.

## FUNGI OF PERUVIAN ANDES.

By M. C. COOKE.

The following small collection was made by Pearce several years ago, and now added to the Herbarium at Kew:—

**Schizophyllum commune, Fries.**

**Lentinus villosus, Fries.**

**Lentinus blepharodes, B. & C.**

**Bolbitius mitriformis, Harvey.**

**Lenzites erubescens, Berk.**

**Lenzites applanata, Fr.**

**Polyporus sanguineus, Fr.**

**Polyporus trichomallus, B. & Mont.**

**Polyporus Fei, Fries.**

**Polyporus Floridanus, Berk.**

**Polyporus versicolor, Fr.**

**Polyporus pinsitis, Fr.**

**Trametes versatilis, Berk.**

**Hexagona variegata, Berk.**

**Irpex sinuosus, Fr.**

**Irpex durescens (Cooke), described as Hydnum.**

**Stereum lobatum, Kunze.**

**Cora pavonia, Fries.**

**Hirneola rufa, Berk.**

**Geaster Peruvianum, Cooke.**

Peridio exteriori coriaceo, paucifido (4-6) explanato, interiori pedicellato umbrino ( $\frac{3}{4}$  unc. diam); ore discoideo fimbriato-ciliato, depresso, subacuto, pallidiore; capillitio profuso, crassiusculo, fusco; sporis globosis, minutissimis, pallide fulvis (.002-.0025 mm.).

On the ground. Peruvian Andes. (*Herb Kewensis*.)

About equal in size to *Geaster Bryantii*.

## BACTERIA AND YEAST FUNGI.\*

This neat and useful little volume makes its appearance just at the time when it is wanted, is amply illustrated, and seems to be carefully and judiciously prepared. We note with satisfaction the announcement in the preface of the sources of information and assistance. It is always a mistake to ignore such help, as is often done by young authors, and hence we commend Mr. Grove for taking the precaution to disarm criticism on this point. The organisms included in this "Synopsis" are acknowledged to be difficult and obscure, so that some little courage was necessary to make the attempt, and we congratulate the author on his success. Although we fear that we must be included with those who doubt the majority of these organisms being autonomous Fungi at all, yet no other course was open but to treat them as such, in the present condition of our knowledge, and until the contrary is proven. "The nonsense which Hallier and Co. tried to introduce into the science" at one time threatened to bring the study of the Schizomycetes into contempt, and we quite appreciate the way in which our author has summarily disposed of them. Of course we may hold a different opinion, or at least suspend our judgment, concerning a small number of the species introduced into this volume, but are by no means disposed to be dogmatic. From the conclusion of the paragraph on page 80, we infer that a more congenial feeling is now predominant in certain quarters than we have recognized in the past. Referring to Brefeld, it states, "and the present long and tedious treatise is filled *ad nauseam* with peevish contentious disputations against De Bary and Van Tieghem, and all others who differ from his opinions." There is only one line in the present volume that we should have preferred to have seen excluded; for the rest we must welcome it, not only for the absence of all "peevish contentious disputations," but for the service it will render to the mycologist and the microscopist, to whom we recommend it as essential to the completeness of even a small library of practical manuals for daily use.

A word or two *apropos* of the Appendix A "On the unit of Microscopical measurement." Twenty years ago, and nearly every important country in Europe employed a different unit. In 1866 the Editor of this Journal, in a paper read at the Quekett Microscopical Club, pointed out the folly and inconvenience of such a course, and initiated the movement for the adoption of the French millimetre as the unit of microscopical measurement, and by circular corresponded with every Society of Microscopists then known on the Continent, with the view of bringing about this change. To this end he was appointed Honorary Secretary for Foreign Correspondence to the Club in question, and, for once, England was in advance, and not in the rear.

\* "A Synopsis of the Bacteria and Yeast Fungi, and allied Species" (Schizomycetes and Saccharomycetes), by W. B. Grove, B.A.; fcap. 8vo., 112 pp., 87 figs. Chatto and Windus.

## SOME EXOTIC FUNGI.

By M. C. COOKE.

**Polyporus (Mes.) veluticeps, Cooke.**

Pileo lento orbiculari, centro umbilicato velutini-tomentoso pallido, obscure concentrice lineato-zonato, margine acuto fusco, stipite erecto, abrupte nigro glabro, contextu pallido, hymenio albedo pallido poris subrotundis minimis æqualibus ( $\frac{1}{4}$  mm.) circa marginem sterili.

On wood. Senna Mozambique (Sir J. Kirk, July, 1859).

Pileus 1 in. broad stem, 1 in. long,  $\frac{1}{4}$  in. thick.

**Mycenastrum (Sterbeekia) lycoperdioides, Cooke.**

Album, pyriforme (1-1 $\frac{1}{2}$  unc. lat. 2 unc. alt.), læve, glabrum, in stipite sterili productum; capillitio sporisque flavido-olivaceo, filis crassis, lævibus, plerumque simplicibus, hinc illic turgidis ( $\cdot 005$ - $\cdot 015$  mm. diam.). Sporibus globosis lævibus ( $\cdot 0045$  mm.), spiculis rectis persistentibus ornatis.

Amongst moss. Nila valley, Garhwal (India), 12,000 feet.

This, together with *M. Oregonense*, Ellis, and *M. leiospermum*, will belong to a sub-genus, for which the name of *Sterbeekia* may be revived, in which the spores are small and smooth, and the capillitium branched, but without the spinulose projections.

**Æcidium Cephalandræ, Cooke.**

Hypophylla. Maculis orbicularibus, fuscis, parvulis, peridiis (4-6 vix ultra), albidis, semi-immersis, leniter fimbriatis, sporis flavidis.

On *Cephalandra palmata*. Natal (Wood, 829).

Spots not more than 1-3 mm. in diameter. Probably this is related to *Puccinia Cephalandræ*, Thum, and *Uredo dolichospora*, Thum, or one of them.

**Puccinia Lagenophoræ, Cooke.**

I. *Æcidium Lagenophoræ*. Epiphyllum. Maculis nullis. Peridiis sparsis, semi-immersis, lacerato-marginatis, albis, sporibus globosis ( $\cdot 012$  mm.).

II. *Uredo Lagenophoræ*. Soris sparsis minimis pulverulentibus fuscis, vel sequenter immixtis, sporibus globosis ( $\cdot 02$  mm.), fuscis, episporio asperulo.

III. *Puccinia Lagenophoræ*. Epiphylla, soris sparsis, atrofuscis, subpulverulentibus, sporibus clavatis, medio constrictis, fuscis loculo supero obscuriore, obtuso, subgloboso, episporio incrassato, lævi, loculo infero in stipitem brevem attenuato ( $\cdot 04$ - $\cdot 045 \times \cdot 02$  mm.).

On living leaves of *Lagenophora Billardieri*. Omeo, Australia.

**Puccinia Ipomeæ, Cooke in Rav. Amer. Fungi. No. 792.**

I. *Æcidium concolvuli*, var. *Ipomeæ*. Schweinitz.

III. Epiphylla, soris in circulos supra Æcidiis efformantibus, vel hypophyllis, cum Æcidiis vetustis immixtis, atro fuscis, pulverulentibus. Sporibus elliptico-fusiformibus, magnis medio constrictis, leniter asperulis, atro fuscis ( $\cdot 05$ - $\cdot 06 \times \cdot 02$ - $\cdot 03$  mm.), pedicellis crassis, elongatis, hyalinis ( $\cdot 06$  mm. long,  $\cdot 004$ - $\cdot 01$  mm. crass.)

On *Ipomea*. Darien, Georgia, U.S. (Rav., No. 4000).

On *Batatas paniculata*. Natal (Wood, No. 882).

The North American and South African plant appear to be identical and possibly not distinct from *P. crassipes*, B. and C.

### MOSSES OF NORTH AMERICA.\*

The volume before us is clearly printed, in excellent type, on good paper, and in every sense promising. Examination of details soon brings the satisfactory conclusion that the promise is well fulfilled, and that this is a useful and valuable contribution to Bryological literature. The plates, on which each genus is illustrated, remind us at once of those in Wilson's "Bryologia," but the letterpress is bolder and more distinct. It is just one of those books which can be used with pleasure, and we congratulate the publishers on the performance of their share of the enterprise. More important still, however, is the matter than the manner, and here again we think that the Bryologist will confess himself satisfied. The surviving author will feel thankful that his labours are brought to a close, for it is no light thing to undertake a "manual" of this kind, as we know from experience, and it is to be hoped that he will be gratified by its reception. To say that the work is fully up to the standard of the time, and has been carefully prepared and edited, is perhaps not a very glowing eulogium, but one which will commend itself to the student. We have heard it stated that it is the duty of a reviewer to hunt up all the faults in a work he can possibly find, and expose them. This is not exactly our estimate of duty, and if it were we must confess that it would puzzle us to find anything in the present book to grumble at. Experience in the use of a work of this kind is always the best test, but one which requires time. It does not appear to us that the authors have any reason to doubt the verdict of experience. It seems to us an honest bit of good work, and we do not hesitate to commend it to our readers. Alas! that we have not such a manual for British Mosses. Wilson's is out of print, and it must be long ere Braithwaite's can be hoped to be completed. The preface to this present volume thus concludes—and with it our hearty commendation:—"This 'Manual of American Mosses' is believed to include descriptions of all the species of mosses (about nine hundred) that are as yet known to occur on the North American Continent within the limits of the United States and northward. It includes the results of the researches of Sullivant and myself, continued until 1872, as well as those of James, Austin, and Rau; and also such species as have been described by European Bryologists, Schimper, Mitten, Mueller, Hampe, Lindberg, &c."

\* "Manual of the Mosses of North America," by Leo Lesquereux and Thomas P. James; six plates, 448 pp., 8vo. Boston: Cassino and Co. London: Trübner and Co.



## SYNOPSIS PYRENOMYCETUM.

(Continued from Vol. XII., p. 113.)

The following genus will be placed after *Hypocrea* as—

GEN. 6 bis. **CLIBANITES**, Karst. Gregaria vel confluens, in stromate subgelatinoso nidulans.

174.\* **C. paradoxa**, Karst. *Myc.*, f. 168.

By a mistaken notion as to its character and affinities this genus has hitherto been placed with the *Discomycetes*.

The following corrections and additions will also be made.

149.\* **Hypocrea (Hypocreopsis) solida** (Schwein).

*Hypozylon solidum* (S.), Berk. in *Sacc. Syll.* No. 1352. *Herb. Berk.* No. 8579.

Ascis clavatis octosporis. Sporidiis biserialibus lanceolatis uniseptatis, medio constrictis, hyalinis, pallide fuscis ( $\cdot 035\text{--}\cdot 006\text{--}\cdot 007$  mm.).

This curious species is fleshy, not in the least carbonaceous, the perithecia are membranaceous, almost obsolete, and its nearest ally is clearly *Hypocreopsis riccioidea* (Bolton).

243.\* **Nectria ferruginea**, Cooke.

Erumpens, cæspitosa. Peritheciis ceraceis subglobosis, atrofuscis, opacis, cum pressione difformibus, ab initio pulvere ferrugineo tectis, demum nudibus, ostiolo pertuso. Ascis clavatis, octosporis, sporidiis fusiformibus, uniseptatis, hyalinis ( $\cdot 025 \times \cdot 005$  m.).

On living leaves, bracts, &c., of *Styphelia* (probably *S. viridiflora*). Omeo. Australia.

431.\* **Dialonectria ostiolorum**, Berk. & Cooke in *Herb. Berk.*

Parasitica, sparsa ochroleuca. Peritheciis globosis minutis ( $\cdot 1\text{--}\cdot 2$  mm.) leniter furfuraceis, superficialibus, ostiolo pertuso. Ascis cylindraceo-clavatis, octosporis. Sporidiis ellipticis, hyalinis, uniseptatis ( $\cdot 012 \times \cdot 005$  mm.).

On *Xylaria rhopaloides*. Cuba.

534.\* **Gibberella calamia**, Cooke.

Peritheciis gregariis, confertis, vertice obtuso conico, demum subcollabentibus opacis, violaceo-cæruleis. Ascis clavatis, mox diffuentibus. Sporidiis nunc ellipticis nunc cylindricis, medio constrictis, valde irregularibus, muriformi-cellulosis, hyalinis ( $\cdot 025\text{--}\cdot 03 \times \cdot 022$  mm. vel.  $\cdot 04\text{--}\cdot 05 \times \cdot 02\text{--}\cdot 022$  mm.).

Surrounding the fruits of *Calamus fasciculatus*. Vizagapatam, S. India.

578. **Acrospermum fultum**, Hark., seems to be identical with *A. corrugatum*, Ellis.

606. **Xylaria Fockei** (Miquel), Sacc., No. 4516.

Stipite cylindrico, receptaculum ellipsoideum vel obovoideum obtusum superante, tota intus coriaceo-cornea vel carbonaceo nigrescens, extus nigrescens, crustula gilvo-albida partim obducta, interque ostiola atra punctuliformia tenere subradiatim nigropunctulata, sporis naviculari-ellipticis acutis simplicibus. *Sphæria* (*Cordyceps*) *Fockei*, Miquel *Fungi Exot.*, p. 198.

In truncis. Surinam.

Stem  $1\frac{1}{2}$  in. long, 1 line thick, black, capitulum  $\frac{1}{2}$ -lin. long, much thicker than the stem.

639. *Xylaria herculea* (Miquel), Sacc., No. 4527.

Receptaculo coriaceo corneo, intus albido, extrorsum nigrescente ac carbonaceo-crustaceo, brevissime stipitato, oblongo vel subclavato, obtusissimo vel sub-attenuato, ostiolis subprominulis, nigro-punctato, cæterum griseo-fusculæ obducto, ascis angustis basi attenuatis obscuris, paraphysibus intermixtis, sporis simplicibus ellipticis obtusis. *Sphæria* (*Cordyceps*) *herculea*. Miquel Fung. Exot., p. 197.

In trunco denudato *Artocarpi incisæ*. Paramaribo.

Stem 2-3 lines long, capitulum 1-4 in. long,  $\frac{3}{4}$ -1 $\frac{1}{2}$  in. thick.

631. *Xylaria Mascarensis*, Cooke.

Suberosa, clavæformis, simplex. Clavula falcata, æqualis (7 unc.  $\times$   $\frac{1}{2}$  unc.) sicco rugulosa, rubro-fusca, deorsum in stipitem æqualem (circ. 3 unc. long) producta. Peritheciis atris, globosis subprominulis, ostiole atro punctiformi instructis. Contextu albo. Ascis immaturis.

On wood. Central Madagascar. Rev. R. Baron (3186) in Herb. Kew.

There is no doubt of the position of this species, in proximity to *X. gomphus*, Fr., although without fruit.

820. *Nummularia glycyrrhiza*, Schweinitz.

Specimens having been found in a fertile condition, the following dimensions have been determined:—Sporidia  $\cdot 011$ - $\cdot 013 \times \cdot 0045$ - $\cdot 005$  mm., very similar to those of *N. placenta*.

## Fam. 2. XYLARIÆ.

Stromaticæ, compositæ; perithecia subimmersa, carbonacea. Sporidia fusca.

GEN. 1. *XYLARIA*, Hill.—Stroma teres, fruticulosum, clavatum v. filiforme, perithecia subimmersa.

A. XYLOGLOSSA. Clava undique fertili, stipite glabro.

a. Capitulum clavatum; stipite tenui, elongato.

\* Simplex.

- |                                     |                                  |
|-------------------------------------|----------------------------------|
| 582. englossa, Fries. ... 1227      | 592. exalbata, Berk. ... 1217    |
| 583. australis, Cooke, Grev. xi. 84 | 593. grammica, Mont. ... 1189    |
| 584. involuta, Klotzsch, Linn. vii. | = <i>ectogramma</i> , B.... 1197 |
| = <i>tabacina</i> , Kickx. 1228     | 594. melanaxis, Ces. ... 1160    |
| = <i>telfairii</i> , Berk. ... 1204 | 595. rhopaloides, Mont.... 1234  |
| 585. Wrightii, B. & C.... 1212      | 596. Schweinitzii, B. & C. 1222  |
| 586. portoricensis, Klotzsch. 1170  | 597. leptopus, Fr. ... 1151      |
| 587. hypœrythra, Mont. 1236         | 598. protea, Fr. ... 1154        |
| 588. guyanensis, Mont. 1165         | 599. complanata, Ces. ... 1221   |
| 589. clavicularis, Klot.... 1172    | 600. fissilis, Ces. ... 1186     |
| 590. gigantea, Zipp. ... 1226       | 601. Berkeleyi, Mont., Grev. xi. |
| 591. olobapha, Berk., Grev. xi. 84  | 85                               |

602. rhytidophlæa, *Mont.* 1200  
 603. zealandica, *Cooke* ... 1209  
 604. nigripes, *Klotsch., Linn.*  
     vii. 203  
     = *escharoidea*, *Berk.* 1184  
     = *piperiformis*, *Berk.* 1280  
     = *mutabilis*, *Curr., Linn.*  
     *Trans.*  
     = *flagelliformis*, *Curr.,*  
     *Linn. Trans.*
605. cubensis, *B. & C.* ... 1177  
 606. Fockei, *Miq., Grev.* xii.  
 607. multifida, *Kunze, Grev.* xi. 85  
 608. acicularis, *Berk., Grev.* xi. 85  
 609. scopiformis, *Mont.* ... 1288  
 610. cordovensis, *Berk., Grev.*  
     xi. 85  
 611. retipes, *Lev.* ... 1198  
 612. sicula, *P. & B.* ... 5943  
 613. columnifera, *Mont.* 1218

\*\* *Furcata.*

614. diceras, *Lev.* ... 1180  
 615. biceps, *Speg.* ... 1179  
 616. divaricata, *Fee* ... 1181  
 617. arenicola, *W. & Curr.* 1158  
 618. Mellisii, *Berk., Grev.* xi. 85  
 619. Gardneri, *Berk.* .. 1164  
 620. portentosa, *Mont.* ... 1250
621. scotica, *Cooke* ... 1202  
 622. ruginosa, *Mont.* ... 1201  
 623. tortuosa, *Sow.* ... 1208  
 624. gracilis, *Klot.* ... 1188  
 625. rhizocola, *Mont.* ... 1199  
 626. Willsii, *Berk., Grev.* xi. 85  
 627. tentaculata, *Rav.* ... 1205
- b. Capitulum subclavatum; stipite crasso, abbreviato vel obsoleto.
628. polymorpha, *Grev.* ... 1150  
 629. variabilis, *W. & Curr.* 1156  
 630. cerebriformis, *Cooke, Grev.*  
     xi. 86  
 631. gomphus, *Fr.* ... 1187  
 632. mascarensis, *Cooke, Grev.*  
     xii.  
 633. papyrifera, *Fr.* ... 1168  
 634. conocephala, *B. & C.* 1176  
 635. Emerici, *Berk., Grev.* xi. 86  
 636. domingensis, *Berk.* 1182  
 637. Titan, *Berk.* ... 1207  
 638. Poiteana, *Lev.* ... 1192  
 639. cynoglossa, *Cke., Grev.* xii. 1  
 640. herculea, *Miq., Grev.* xii.  
 641. regalis, *Cooke, Grev.* xi. 86  
 642. obtusissima, *Berk.* ... 1194  
 643. turgida, *Fr.* ... 1155  
 644. lobata, *Cooke, Grev.* xi. 86  
 645. zeylanica, *Berk.* ... 1210  
 646. lingua, *Lev.* ... 1193  
 647. castorea, *Berk.* ... 1246
648. aenea, *Mont.* ... 1215  
 649. allantoidea, *Berk.* ... 1178  
 650. Thwaitesii, *B., Grev.* xii. 1  
 651. fistulosa, *Lev.* ... 1185  
 652. dealbata, *B. & C.* ... 1223  
 653. fistuca, *Berk.* ... 1171  
 654. siphonia, *Fr.* ... 1153  
 655. curta, *Fr.* ... 1152  
 656. plebeja, *Ces.* ... 1195  
 657. echinata, *Lev.* ... 1183  
 658. anisopleura, *Mont.* ... 1219  
 659. microceras, *Mont.* ... 1211  
 660. platypoda, *Lev.* ... 1235  
 661. enterogena, *Mont.* ... 1214  
 662. fulvella, *B. & C.* ... 1166  
 663. phosphorea, *Berk.* ... 1167  
 664. salmonicolor, *Berk., Grev.*  
     xi. 87  
 665. clavulata, *Schw.* ... 1238  
 666. pumila, *Fr.* ... 1169  
 667. Capensis, *Lev.* ... 5951

## c. Capitulum subglobosum.

668. cretacea, *Berk. & Br.* 5963  
 669. piliceps, *Berk.* ... 1174  
 670. pyramidata, *B. & W.* 1196  
 671. marasmoides, *B. &*  
     *Cooke* ... 1161  
 672. stilboidea, *Ka. & Cke.* 1203
673. cudonia, *B. & C.* ... 1213  
 674. obovata, *Berk.* ... 1191  
 675. tuberiformis, *Berk.* 1225  
 676. glebulosum, *Ces.* ... 1494  
 677. globosa, *Mont.* 1426  
 678. clavulus, *B. & C.* ... 1220

679. hæmorrhoidalis, *B.* ... 1163 680. intermedia, *Ces.* ... 1162  
 & *Br.* ... 1163 681. favosa, *Berk., Grev. xi.* 87

*d. Capitulum applanatum, subdiscoideum.*

682. frustulosa, *B. & C....* 1534 684. Berterii, *Mont.* ... 1395  
 683. pauxillum, *Ces.* ... 1375 685. natalensis, *Berk. in Herb.*

*B. XYLOCORYNE. Clava undique fertili, stipite villosa.*

*a. Capitulum clavatum ; stipite tenui elongato.*

686. spathulata, *B. & Br.* 1257 692. multiplex, *Kunze* ... 1244  
 687. longipes, *Nke.* ... 1240 693. scruposa, *Mont.* ... 1252  
 688. hispidula, *B. & C....* 1255 694. polycladia, *Lev.* ... 1267  
 689. Beccariana, *Pass....* 1243 695. radicata, *B. & C.* ... 1251  
 690. fastigiata, *Fr.* ... 1242 696. comosa, *Mont.* ... 1253  
 691. geoglossum, *Schwz.* 1245 697. tenuissima, *Fr.* ... 1258

*b. Capitulum clavatum, stipite abbreviato.*

698. corniformis, *Mont.* 1239 700. alpina, *Speg.* ... 1249  
 699. aphrodisiaca, *W. & C.* 1241

*c. Capitulum subglobosum.*

701. collabens, *Mont.* ... 1247

*C. XYLOSTYLA. Clava apice sterili, stipite glabro.*

*a. Capitulum clavatum, simplex vel cristatum.*

702. ventricosa, *B., Grev. xi.* 87 708. inæqualis, *B. & C....* 1295  
 703. Kegeliana, *Lev.* ... 1190 709. fustis, *Mont., Grev. xi.* 87  
 704. pallida, *Cooke* ... 1237 710. myosurus, *Mont.* ... 1159  
 705. graminicola, *Ger.* ... 1286 711. mucronata, *Schwz.* 1279  
 706. coronata, *West* ... 1175 712. phyllophila, *Ces.* ... 1293  
 707. cristata, *Speg.* ... 1290 713. phyllocharis, *Mont.* 1294

*b. Capituli connati vel ramosi.*

714. digitata, *Fr.* ... 1283 719. rhizomorpha, *Mont.* 1300  
 715. grandis, *Peck* ... 1284 720. adscendens, *Fr.* ... 1248  
 716. stuppea, *Wallr.* ... 1266 721. fasciculata, *Speg.* ... 1289  
 717. cæspitulosus, *Ces.* ... 1287 722. coccophora, *Mont....* 1291  
 718. bulbosa, *Pers.* ... 1285

*c. Capitulum ovatum vel subglobosum.*

723. vaporaria, *Berk.* ... 1292 725. axifera, *Mont.* ... 1301  
 724. thyrsus, *Berk.* ... 1206

*d. Stroma filiformia, perithecia laxa.*

726. tricolor, *Fr.* ... 1297 729. axillaris, *W. & Curr.* 1157  
 727. filiformis, *Fr.* ... 1296 730. furcata, *Fr.* ... 1298  
 728. gracillima, *Mont.* ... 1299 731. areolata, *Lev.* ... 5955

*D. XYLODACTYLA. Clava apice sterili, stipite villosa.*

*a. Capitulum clavatum simplex.*

732. trachelina, *Lev., Ann. Sci. Nat., 1860, 304* 734. persicaria, *Schwz....* 1268  
 733. apiculata, *Cooke* ... 1264 735. carpophila, *Fr.* ... 1270  
 736. oxyacanthæ, *Lev....* 1271



## a. Stromate simplici.

785. cænopus (*Mont.*) ... 1488    789. confusum (*B. & C.*), *Grev.*  
 786. aggregatum (*W. & C.*) 1427    790. micropus (*Berk.*) ... 1491  
 787. angolense (*W. & C.*) 1519    791. congestum (*B. & Br.*) 1402  
 788. clavus (*Fr.*) ... 5994    792. Berkeleyanum, *Cooke, Grev.*

## b. Stromate multipartiti.

793. cetrarioides (*W. & Curr.*) ... 1489    796. contracta (*Speg.*) ... 1233  
 794. lichenoides (*B.*) ... 1489    797. Kurziana (*Curr.*), *Grev.* xii.  
 795. Puiggarii (*Speg.*) ... 1232    798. microcephala (*Mont.*) 1256  
 799. xylarioides (*Speg.*) 1490

GEN. 6. **USTULINA**, *Tul.*—Stroma repando-pulvinatum, cras-  
sum senio intus subcavum.

800. vulgaris, *Tul.* ... 1328    804. tessulata, *Berk.*, *Grev.* xii. 3  
 801. Brasiliensis, *Speg.* ... 1329    805. pavimentosa (*Ces.*) 1374  
 802. macrosperma, *Mont.* 1330    806. tuberiformis (*Wallr.*) 1428  
 803. zonata (*Lev.*) ... 1331

GEN. 7. **BOLINIA**, *Nitschke.*—Stroma effusum, perithecia im-  
mersa, collis longiusculis.

807. tubulina (*A. & S.*) ... 1332

GEN. 8. **NUMMULARIA**.—Stroma disciforme, v cupuliforme,  
adnatum marginatum.

## SECT. A.—Disco concavo.

808. repanda, *Fr.* ... 1525    813. macrocenangium, *Ces.* 1411  
 809. discreta, *Schw.* ... 1529    814. Moselei, *Berk.* ... 1421  
 810. discincola, *Schw.* ... 1104    815. lutea, *A. & S.* ... 1528  
 811. obularia, *Fr.* ... 1540    816. succenturiata, *Tode.* 1527  
 812. Baileyi, *B. & Br.* ... 1531    817. gigas, *Plow.* ... 1531

## SECT. B.—Disco convexo.

818. Bulliardi, *Tul.* ... 1524    834. mauritanica, *B. & Cke.*  
 819. constricta, *Fr.* ... 1543    835. rumpens, *Cke.* ... 1140  
 820. repandoides, *Fckl.* ... 1526    836. placenta, *Kalch.* ... 1377  
 821. clypeus, *Schw.* ... 1524    837. microplaca, *B. & Rav.* 1112  
 822. glycirrhiza, *B. & C.* 1541    838. hypophlæa, *B. & Rav.* 1137  
 823. macula, *Schw.*, *Grev.* xii. 6    839. testudinea, *Cke.*, *Grev.* xii. 7  
 824. regia, *DeNot.* ... 1538    840. tenuis, *Pass.* ... 1537  
 825. mediterranea, *DeNot.* 1539    841. Phillyreæ, *Mont.* ... 1116  
 826. anthracodes, *Fr.* ... 1383    842. heterostoma, *Mont.* 1380  
 827. comedens, *Ces.* ... 1389    843. scriblita, *Mont.* ... 1405  
 828. dryophila, *Tul.* ... 1530    844. scutata, *B. & Cke.*, *Grev.* 7  
 829. pithodes, *B. & Br.* ... 1109    845. cycliscus, *Mont.* ... 1408  
 830. fossulata, *M.* ... 1455    846. melanaspis, *Mont.* ... 1419  
 831. microsticta, *M.* ... 1415    847. ? Carabayense, *Mont.* 1400  
 832. exutans, *Cke.* ... 1105    848. ? pachyloma, *Lev.* ... 1417  
 833. australis, *Cke.*, *Grev.* xii. 6    849. ? sertata, *DR. & M.* 1372

GEN. 9. **DALDINIA**, *De Not.*—Stroma subsphæroideum, cortice carbonaceo nigricante intus fibrosi concentricè zonatum.

- |  |          |                                  |          |
|--|----------|----------------------------------|----------|
| 850. concentrica ( <i>Bolt.</i> )          | 1515     | 854. Feei, <i>Sacc.</i>          | ... 1520 |
| 851. vernicosa ( <i>Schw.</i> )            | ... 1516 | 855. cingulata, <i>Lev.</i>      | ... 1521 |
| 852. durissima ( <i>Fr.</i> )              | ... 1517 | 856. loculata ( <i>Lev.</i> )    | ... 1522 |
| 853. asphalatum ( <i>Link. &amp; Fr.</i> ) | ... 1518 | 857. Thouarsiana ( <i>Lev.</i> ) | 1523     |

GEN. 10. **HYPOXYLON**.—Stroma effusum vel subglobosum. solidum, perithecia in stromate innato-prominula, collis subnullis.

I. **MACROXYLON**. Maxima, indurata, irregularis, intus fibrosa.

a. Perithecia monosticha.

- |                                      |          |                                       |          |
|--------------------------------------|----------|---------------------------------------|----------|
| 858. cerebrinum, <i>Fee.</i>         | ... 1224 | 863. placentiforme, <i>B.</i>         | ... 1535 |
| 859. Wrightii, <i>B. &amp; C.</i>    | ... 1533 | 864. suborbiculare, <i>Curr.</i>      | 1536     |
| 860. cœlatum, <i>Fr.</i>             | ... 5964 | 865. Broomeanum, <i>B. &amp; C.</i>   | 1460     |
| 861. corrugatum, <i>Fr.</i>          | ... 5965 | 866. viridi-rufum, <i>B. &amp; R.</i> | 5966     |
| 862. sclerophæum, <i>B. &amp; C.</i> | 1341     |                                       |          |

b. Perithecia stratosæ.

- |                                   |          |                           |      |
|-----------------------------------|----------|---------------------------|------|
| 867. Petersii, <i>B. &amp; C.</i> | ... 1406 | 868. ovinum, <i>Berk.</i> | 5967 |
|-----------------------------------|----------|---------------------------|------|

II. **PHYLACIA**. Stroma erectum, laccatum.

a. Species perfectæ.

869. turbinatum, *Berk.*... 1422

b. Species imperfectæ.

- |                                |          |                               |          |
|--------------------------------|----------|-------------------------------|----------|
| 870. sagræanum, <i>Mont.</i>   | 1320     | 873. Carteri, <i>Berk.</i>    | ... 5961 |
| 871. globosum, <i>Lev.</i>     | ... 1426 | 874. ramulosum, <i>Schwz.</i> | 5962     |
| 872. poculiformis, <i>Lev.</i> | ... 5968 |                               |          |

II. **SPHÆROXYLON**. Stroma superficiale, globosum or subglobosum.

a. Stroma coloratum, non nigrum.

- |  |          |                                       |          |
|--|----------|---------------------------------------|----------|
| 875. coccineum, <i>Bull.</i>           | ... 1333 | 885. rutilum, <i>Tul.</i>             | ... 1344 |
| 876. Howeianum, <i>Peck.</i>           | 1338     | 886. Laschii, <i>Ntke.</i>            | ... 1345 |
| 877. commutatum, <i>Ntke.</i>          | 1350     | 887. luridum, <i>Ntke.</i>            | ... 1347 |
| 878. deciduum, <i>B. &amp; Br.</i>     | 1403     | 888. Bagnisii, <i>Sacc.</i>           | ... 1348 |
| 879. enteromelum, <i>Schwz.</i>        | 1355     | 889. notatum, <i>B. &amp; C.</i>      | ... 1360 |
| 880. suberosum, <i>B. &amp; C.</i>     | ... 1359 | 890. gilvum, <i>Jungh.</i>            | ... 1353 |
| 881. pulchellum, <i>Sacc.</i>          | ... 1335 | 891. scleroderma, <i>Mont.</i>        | 1334     |
| 882. vera-crucis, <i>B. &amp; Cke.</i> | 5970     | 892. distillatum, <i>B. &amp; Br.</i> | 1340     |
| 883. argillaceum, <i>Pers.</i>         | ... 1337 | 893. botrys, <i>Ntke.</i>             | ... 1349 |
| 884. palumbinum, <i>Quel.</i>          | 1339     | 894. fuscum, <i>Pers.</i>             | ... 1368 |

b. Stroma nigrum.

- |   |          |                                    |          |
|---|----------|------------------------------------|----------|
| 895. multiforme, <i>Fr.</i>                     | ... 1376 | 900. areolatum, <i>B. &amp; C.</i> | 1386     |
| 896. teres ( <i>Schwz?</i> ) <i>B. &amp; C.</i> | 1493     | 901. avellana, <i>Ces.</i>         | ... 1425 |
| 897. majusculum, <i>Cke.</i>                    | ... 1369 | 902. Hookeri, <i>Berk.</i>         | ... 5973 |
| 898. malleolus, <i>B. &amp; C.</i>              | 1413     | 903. nodulorum, <i>Lev.</i>        | ... 5974 |
| 899. hians, <i>B. &amp; Cke.</i>                | ... 5972 | 904. fragaria, <i>Ces.</i>         | ... 1393 |

905. *cohærens*, *Pers.* ... 1370    910. *placenta*, *Link.* ... 1404  
 906. *leucostigma*, *Lev.* ... 1391    911. *turbinulatum*, *Schwz.* 1407  
 907. *comaropsis*, *Mont.* ... 1398    912. *campotrichum*, *Mont.* 1409  
 908. *bomba*, *Mont.* ... 1399    913. *porosum*, *Mont.* ... 1381  
 909. *Murrayi*, *B. & C.* ... 1397    914. *glomiforme*, *B. & C.* 1364

IV. *CLITOXYLON*. *Stroma pulvinatum plus minus convexum, nec effusum.*

a. *Stroma coloratum, non nigrum.*

915. *xanthocreas*, *B. & C.* 1302, 923. *vividum*, *B. & Br.* ... 1356  
       1361                                924. *quisquilarum*, *Mont.* 1366  
 916. *hæmatostroma*, *Mont.* 1435    925. *pruinatum*, *Klot.* ... 942  
 917. *epiphlaeum*, *R. & C.* 1444    = *Holwayi*, *Ellis.* ... 5975  
 918. *hypomiltum*, *Mont.* 1336    926. *discolor*, *B. & C.* ... 1363  
 919. *decorticatum*, *Schwz.* 1354    927. *eterio*, *B. & Br.* ... 1133  
 920. *irradians*, *Mont.* ... 1424    928. *endoxanthum*, *Mont.* 1362  
 921. *discoideum*, *Cke.* ... 1346    929. *polyporoideum*, *B., Grev.*  
 922. *vinosum*, *Mont.* ... 1365                xii. 53

b. *Stroma nigrum.*

930. *leucocreas*, *B. & R.* 1388    947. *Catalpæ*, *Schwz.* ... 1509  
 931. *lucidulum*, *Mont.* ... 1390    948. *approximans*, *Ces.* ... 1481  
 932. *microsporum*, *Ces.* ... 1417    949. *exurgens*, *Mont.* ... 1387  
 933. *exiguum*, *Cke.* ... 5976    950. *transversum*, *Schwz.* 1505  
 934. *stigmoideum*, *Ces.* ... 1378    951. *Javanicum*, *Lev.* ... 1382  
 935. *annulatum*, *Schwz.* 1384    952. *Mascarensis*, *Berk.* 5979  
 936. *Pouceanum*, *B. & Cke.* 5977    953. *leucostomum*, *Cke.* 5980  
 937. *durissimum*, *Schwz.* 1447    954. *pauperatum*, *Karst.* 1373  
 938. *chalybeum*, *B. & Br.* 945    955. *Ayresii*, *Berk.* ... 5981  
 939. *obesum*, *Fr.* ... 1401    956. *undosum*, *Lev.* ... 1410  
 940. *marginatum*, *Schwz.* 1414    957. *spondylinum*, *Fr.* ... 1542  
 941. *polyspermum*, *Mont.* 1479    958. *ramosum*, *Schwz.* ... 5982  
 942. *callostroma*, *Schwz.* 1472    959. *monticulosum*, *Mont.* 1396  
 943. *smilacicum*, *Howe.* 1371    960. *Mauritanicum*, *D. & M.* 1418  
 944. *rimarum*, *B. & Cke.* 5978    961. *Phoenix*, *Fr.* ... 1466  
 945. *sassafras*, *Schwz.* ... 1451    962. *culmorum*, *Cke.* ... 1416  
       = *H. fucicolor*, *B. & C.*    963. *Kurzianum*, *Curr.* ... 1429  
 946. *xanthostromum*, *Sch.* 1507

IV. *PLACOXYLON*. *Stromate late et vage effuso.*

a. *Stroma coloratum, non nigrum.*

964. *purpureum*, *Nike.* ... 1430    973. *anthochroum*, *B. & Br.* 1442  
 965. *perforatum*, *Schwz.* 1431    974. *fuscopurpureum*, *Sch.* 1446  
 966. *atropurpureum*, *Fr.* 1433    975. *florideum*, *B. & C.* ... 1440  
 967. *rubiginosum*, *Pers.* 1434    976. *ianthinum*, *Cke.* ... 5987  
 968. *hæmatites*, *Lev.* ... 5984    977. *atropunctatum*, *Schwz.* 1102  
 969. *trugodes*, *B. & Br.* 1439    978. *capnodes*, *Berk.* ... 1113  
 970. *murcidum*, *B. & Br.* 1478    979. *jecorinum*, *B. & Rav.* 1445  
 971. *piceum*, *Ellis.* ... 5985    980. *crocopeplum*, *B. & C.* 1437  
 972. *Fendleri*, *Berk.* ... 5986    981. *crocatum*, *Mont.* ... 1438



982. *miniaturum*, *Cke.* ... 1432      984. *ochraceofulvum*, *B. & Cke.*  
 983. *subgilvum*, *B. & Br.* 1443      985. *chrysoconium*, *B. & Br.* 1436

*b. Stroma nigrum.*

986. *Cesatianum*, *Cke.* 5989      1004. *investiens*, *Schwz.* 1470  
 987. *stygium*, *Lev.* ... 1452      1005. *concurrrens*, *B. & C.* 1474  
 988. *tomentosum*, *Cea.* 1465      1006. *crustaceum*, *Nike.* 1453  
 989. *stigmatum*, *Cke.* 1453      1007. *reticulatum*, *K.* ... 1454  
 990. *oodes*, *Berk.* ... 1456      1008. *subterraneum*, *Fckl.* 1462  
 991. *bifrons*, *Not.* ... 1483      1009. *unitum*, *Fr.* ... 1476  
 992. *æneum*, *Nike.* ... 1483      1010. *colliculosum*, *Schwz.* 1477  
 993. *hypoleucum*, *B. & Br.* 5990      1011. *caries*, *Schwz.* ... 1510  
 994. *epirhodium*, *B. & R.* 1457      1012. *allantoideum*, *Cke.* 1480  
 995. *punctulatum*, *B. & R.* 1534      1013. *Michelianum*, *Not.* 1482  
 996. *tinctor*, *Berk.* ... 741      1014. *illitum*, *Schwz.* ... 1511  
 997. *macrosporum*, *Karst.* 1473      1015. *irregulare*, *Cke.* ... 5991  
 998. *serpens*, *Pers.* ... 1448      1016. *glomeratum*, *Cke.* 5992  
 999. *Archeri*, *Berk.* ... 1449      1017. *Beaumontii*, *B. & C.* 2848  
 1000. *effusum*, *Nike.* ... 1450      1018. *atramentosum*, *Sch.* 1503  
 1001. *Vogesiacum*, *Pers.* 1454      1019. *bipapillatum*, *B. & C.* 1467  
 1002. *fragile*, *Nike.* ... 1459      1020. *incrustans*, *P.* ... 1504  
 1003. *Lenormandi*, *B. & C.* 1458

**V. ENDOXYLON.** *Stromate matrice plus v minus immerso.*

1021. *udum*, *Pers.* ... 1485      = *confluens*, *Auct.*  
 1022. *minutum*, *Nike.* ... 1486      1024. *Massaræ*, *Not.* ... 1141  
 1023. *semi-immersum*, *N.* 1487      1025. *prorumpens*, *Fr.* ... 5993

**DUBLÆ.**

1026. *sclerotoidum*, *B.* 1351      1031. *exertum*, *Fr.* ... 1501  
 1027. *gangrena*, *Ces.* ... 1358      1032. *exaratum*, *Schwz.* 1506  
 1028. *lobatum*, *Fr.* ... 1499      1033. *sphæriostomum*, *Sch.* 1508  
 1029. *glomus*, *B. & C.* ... 1394      1034. *hydnicolum*, *Schwz.* 1471  
 1030. *Uranisæ*, *Mont.* ... 1500      1035. *arecarium*, *Bory.* ... 1468

**CALIFORNIAN FUNGI.**

By M. C. COOKE AND W. H. HARKNESS.

(Continued from Vol. XII., p. 97.)

The following is an enumeration of the new and rare species collected by Dr. Harkness in California, in continuation. Species previously known, amounting to some hundreds, have not been enumerated, as they would occupy more space than we are able to set apart for the purpose.

**Phoma solani**, *Cke. & Hark.*

*Gregaria*. *Perithecia minuta*, membranacea, subglobosa, papillata, tecta. *Sporis ellipticis*, *hyalinis* (·006-·007 × ·004 mm.).

On *Solanum*. Harkness (No. 2300).

**Macropodia arctostaphyli**, Cke. & Hark.

Epiphylla, sparsa. Peritheciis subglobosis, atris, erumpentibus. Sporis subglobosis, ellipticisve ( $\cdot 008 \times \cdot 006$  mm.) fuligineofuscis.

On leaves of *Arctostaphylos*. California. Harkness (No. 2480).

**Sphaeropsis cupressi**, Cke. & Hark.

Erumpens. Peritheciis atris, obtusis, primum tectis, demum erumpentibus, epidermide circumambiente arcte adherentibus. Sporis ellipticis, continuis, hyalinis, cytoplasmate granuloso ( $\cdot 03 \times \cdot 01$  mm.).

On bark of *Cupressus macrocarpus*. California. Harkness (No. 2064).

**Didymaria clematidis**, Cke. & Hark.

Hypophylla. Maculis griseo-fuscis, subellipticis. Sporis elliptico-elongatis hyalinis, demum uniseptatis, breviter pedicellatis ( $\cdot 025 \times \cdot 008$  mm.).

On leaves of *Clematis*. Harkness (No. 2543).

**Cercospora rubigo**, Cke. & Hark.

Epiphylla, vel hypophylla. Maculis ferrugineis, ellipticis irregularibusque. Hyphis brevissimis, sparsis. Sporis cylindricis rectis curvulisque, utrinque obtusis, 3-4 septatis, hyalinis ( $\cdot 035\text{--}\cdot 04 \times \cdot 004$  mm.).

On leaves of *Spiræa*. Harkness (No. 2527).

**Diatrype ceanothi**, Cke. & Hark.

Acervulis verrucæformibus, innato-erumpentibus, atris, rotundatis, peridermio arcte cinctis, intus concolori. Peritheciis compressis difformibusque, ostiolis brevibus, stellato-sulcatis. Ascis clavatis, octosporis. Sporidiis cylindræis, curvulis, utrinque rotundatis, luteolis, hyalinis ( $\cdot 012\text{--}\cdot 014 \times \cdot 002$  mm.).

On branches of *Ceanothus*. California. Harkness (No. 2541).

**Diatrype asterostoma**, var. *minor*.

On *Rhododendron*. Harkness (No. 2527).

**Valsa agnostica**, Cke. & Hark.

Erumpens, subrotunda convexa, cæspitulis in cortice nidulantibus primo tectis, demum disco sub-orbiculari nudo. Peritheciis (8-12) subglobosis, atris, in stromate pallido aggregatis, ostiolis brevibus rectis, obtuso-rotundatis, nitidis. Ascis subclavatis, octosporis. Sporidiis allantoideis, rectis curvulis-que, biserialibus, hyalinis ( $\cdot 006\text{--}\cdot 007 \times \cdot 0015$  mm.).

On branches of *Ribes*. California. Harkness (No. 2554).

**Valsaria majuscula**, Cke. & Hark.

Tecta. Pustulis sparsis, vix prominulis, peritheciis 6-10 compositis, demum cuticula perforantibus, ostiolis brevibus obtusis. Ascis amplis. Sporidiis majusculis, ellipticis, medio constrictis, utrinque rotundatis, uniseptatis, fuscis ( $\cdot 05 \times \cdot 025$  mm.).

On branches of *Salix*. California. Harkness (No. 1997).

Sometimes the large sporidia are extruded, and form blackened spots around the ostiola, as in *Massaria*, but this is by no means a constant feature. The absence of any hyaline investment of the sporidia also confirm this as a *Valsaria* rather than *Massaria*.

**Diaporthe (Euporthe) gorgonoidea**, Cke. & Hark.

Stromate effuso, cortice facile solubili tecto, ligni superficiem nigrificante v. crustam interruptam sistente, intus nigro-limitato; peritheciis globosis, ligno immersis, plerumque dense stipatis; ostiolis cylindricis, gracilibus flexuosis, maxime elongatis. Ascis cylindrico-clavatis, octosporis. Sporidiis fusiformibus, biseriatis, rectis quadri-nucleatis demum 2-4 cellularibus, hyalinis ( $\cdot 015\text{--}\cdot 017 \times \cdot 003$  mm.).

On Australian *Acacia*. California. Harkness (No. 2525).

Closely allied to *D. medusæa* and *D. fasciculata*.

**Sphæria (Wallrothiella) eunotiæspora**, Cke. & Hark.

Superficialis, gregaria. Peritheciis ob-pyriformibus ( $\frac{1}{2}$  mm.) atris, subnitidis, lævibus, fragilibus. Ascis clavatis. Sporidiis ellipticis, medio inflatis, biseriatis, continuis ( $\cdot 03\text{--}\cdot 035 \times \cdot 012\text{--}\cdot 014$  mm.) plasmate granuloso.

On Australian *Acacia*, decorticated. California. Harkness (No. 2111).

Mixed with a species of *Diplodia*.

**Sphæria (Melanomma) seminis**, Cke. & Hark.

Superficialis, gregaria. Peritheciis ( $\frac{1}{3}\text{--}\frac{1}{2}$  mm.) atris, opacis, subglobosis, quandoque subconfluentibus, ostiolo pertuso. Ascis clavatis. Sporidiis cylindræis, rectis curvulisve, 5 septatis, fuscis ( $\cdot 05 \times \cdot 006$  mm.).

On twigs of *Baccharis*. California. Harkness (No. 2511).

**Sphæria (Anthostoma?) gigaspora**, Cke. & Hark.

Sparsa, subimmersa, matrice substantia tubercula orbicularia elevata tecta, peritheciis globosis magnis ( $1\frac{1}{2}\text{--}2$  mm.), ostiolo obtuso, nigro-punctatis. Ascis amplis, saccatis, octosporis. Sporidiis elongato-ellipticis, utrinque leniter attenuatis, continuis, atro-fuscis ( $\cdot 065\text{--}\cdot 08 \times \cdot 025\text{--}\cdot 03$  mm.).

On decorticated twigs. California. Harkness (No. 2266).

In habit resembling *Sphæria cubicularis*, Fr., but with much larger sporidia, and, as in that species, the perithecia fall out, leaving holes not unlike a large *Stictis*.

**Sphæria (Anthostomella) oreodaphnes**, Cke. & Hark.

Sparsa, epidermide innata, tecta. Peritheciis globosis, epidermide tumidula et leniter nigrificata velatis, vix papillatis. Ascis cylindræis, octosporis. Sporidiis arcte ellipticis, utrinque rotundatis, fuscis ( $\cdot 014\text{--}\cdot 015 \times \cdot 004$  mm.).

On leaves of *Umbellularia*. California. Harkness (No. 2459).

**Sphæria (Didymella) megarrhiza**, Cke. & Hark.

Sparsa, tecta. Peritheciis subglobosis, mox depressis, atris, ostiolo papillatis. Ascis subclavatis. Sporidiis biserialibus, ellipticis, uniseptatis, vix constrictis, hyalinis, pallide luteolis ( $\cdot 012\text{--}\cdot 014 \times \cdot 006$  mm.).

On *Megarrhiza Californica*. California. Harkness (Nos. 2087, 2088).

**Sphæria (Didymella) lupini**, Cke. & Hark.

Sparsa, punctiformia. Peritheciis tectis, globoso-depressis, leniter papillatis. Ascis clavatis. Sporidiis ellipticis, uniseptatis,

hyalino-flaveolis (immaturis?). Cytoplasmate granuloso ( $\cdot 015 - \cdot 017 \times \cdot 006 - \cdot 007$  mm.).

On stems of *Lupinus*. California. Harkness (No. 2074).

**Sphaeria (Didymosphaeria) ceanothi**, Cke. & Hark.

Tecta, sparsa. Peritheciis globoso-applanatis, atris, breviter papillatis. Ascis amplis, clavatis, octosporis. Sporidiis ellipticis, uniseptatis, medioconstrictis, atro-fuscis ( $\cdot 035 \times \cdot 015$  mm.).

On twigs of *Ceanothus*. California. Harkness (No. 2542).

**Sphaeria (Didymosphaeria) sarmenti**, Cke & Hark.

Sparsa. Peritheciis tectis, subglobosis, atris, laevibus, demum applanatis, ostiolo brevi punctiformi. Ascis cylindrico-clavatis. Sporidiis ellipticis, uniseptatis, medio nec constrictis, fuscis ( $\cdot 012 \times \cdot 005$  mm.).

On "Canary Vine." California. Harkness (No. 1957).

**Sphaeria (Amphisphaeria) Wellingtonia**, Cke. & Hark.

Gregaria, immersa. Peritheciis atris, elongato-compressis, hysterioideis, striatis, opacis ( $\cdot 15 - \cdot 18$  mm. long,  $\cdot 08$  mm. lat.), poro pertusis. Ascis cylindraceutis, 8 sporis. Sporidiis ellipticis, uniseptatis, fuscis, vix constrictis, loculo utroque uniguttulato ( $\cdot 012 - \cdot 014 \times \cdot 008$  mm.).

On bleached wood of *Sequoia*. California (No. 2218).

**Sphaeria (Amphisphaeria) decorticata**, Cke. & Hark.

Primitus seriatis, intra fibrillas corticis nidulans, demum sub-superficialis. Peritheciis erumpentibus, subserialibus sparsisve, subglobosis, atris, opacis (vix  $\frac{1}{2}$  mm. diam.) Ascis cylindraceutis octosporis. Sporidiis ellipticis, uniseptatis, medio arcte constrictis, cellulis subglobosis efformantibus, laete fuscis ( $\cdot 018 \times \cdot 009$  mm.).

On decorticated branches of *Quercus*. California (No. 2502).

**Sphaeria (Metasphaeria) plagarum**, Cke. & Hark.

Gregaria, tecta, elevata. Peritheciis subglobosis, atris, carbonaceis, in plagas consociatis, cuticulâ elevatâ convexo tectis. Ascis clavatis, sessilibus, octosporis. Sporidiis lanceolatis, inordinatis, triseptatis, hyalinis ( $\cdot 018 - \cdot 02 \times \cdot 004$  mm.), utrinque acutis.

On bark of *Eucalyptus*. California. Harkness (Nos. 2516, 2345).

**Sphaeria (Leptosphaeria) ceanothi**, Cke. & Hark.

Gregaria, tecta. Peritheciis minutis subglobosis, epidermide velatis, ostiolo brevi, punctiformi. Ascis breviter clavatis, octosporis. Sporidiis sublanceolatis, triseptatis, hyalino-luteolis ( $\cdot 016 - \cdot 018 \times \cdot 0045$ ).

On small twigs of *Ceanothus*. California. Harkness (No. 2536).

**Sphaeria (Leptosphaeria) odora**, Cke. & Hark.

Tecta, subsparsa. Peritheciis mediis, globosis, atris, in cortice nidulantibus, epidermide convexo tectis, ostiolo punctiformi. Ascis clavatis octosporis. Sporidiis lanceolatis, biseriatis, primum uniseptatis, demum triseptatis, hyalino-luteolis ( $\cdot 022 - \cdot 025 \times \cdot 005$  mm.).

On branches of *Umbellularia*. California. Harkness (No. 2563).

**Sphaeria (Leptosphaeria) bicuspidata**, Cke. & Hark.

Sparsa, tecta. Peritheciis innatis subprominulis, globosis, atris, ostiolo brevi. Ascis clavatis, octosporis. Sporidiis fusiformibus,

triseptatis, constrictis, fuscis, utrinque hyalino-cuspidatis ( $\cdot 025 \times \cdot 008$  mm.), sine cuspes.

On twigs of *Baccharis*. California. Harkness (No. 2517).

**Sphaeria (Leptosphaeria) Californica**, Cke. & Hark.

Densissime gregaria, tecta. Peritheciis hemisphaerico-prominulis, obtusis, atris diu epidermide velatis, demum apice subnudis. Ascis clavatis. Sporidiis biseriatis, sublanceolatis, utrinque obtusis, 4 septatis, cellula penultima subincrassata, pallide fuscis ( $\cdot 025\text{--}\cdot 03 \times \cdot 008$  mm.).

On *Araucaria imbricata* (Nos. 2330, 2331, 2332).

On *Sarothamnus* (Nos. 2396, 2299).

On *Rhododendron*, (No. 2538).

On *Euonymus*, twigs and leaves (Nos. 2238, 2358).

Differs from *S. anisometra* in the perithecia being densely gregarious, so as sometimes to blacken the twigs for some inches, and in the brown sporidia, although it is probable that the sporidia in *S. anisometra*, when old, acquire a brownish colour.

**Sphaeria (Leptosphaeria) anisometra**, Cooke.

On leaves of *Eucalyptus* (Nos. 2308, 2410).

On twigs of *Fucalypsus* (Nos. 2022, 2373).

**Sphaeria (Teichospora) eucalypti**, Cke. & Hark.

Sparsa. Peritheciis subsuperficialibus, parvis, subglobosis, atris. Ascis cylindraceis, octosporis. Sporidiis uniserialibus, ellipticis, medio leniter constrictis, 5-7 septatis muriformibusque, fuscis ( $\cdot 02\text{--}\cdot 022 \times \cdot 008$  mm.).

On dead bark of *Eucalyptus*. California (No. 2400).

**Sphaeria (Thyridium) personatum**, Cke. & Hark.

Lignicola. Peritheciis sparsis, in tubercula ligneo ellipsoideo elevato griseo vel nigrescente nidulantibus, ostiolo brevi vix conspicuo, pertuso. Ascis cylindraceis octosporis. Sporidiis uniserialibus, ellipticis, medio constrictis, triseptatis, septis 1-2 longitudinalibus percursis, laete brunneis ( $\cdot 018\text{--}\cdot 02 \times \cdot 01$  mm.).

On decorticated *Acacia*. California. Harkness (No. 2111.)

**Sphaeria (Thyridium) Garryae**, Cke. & Hark.

Gregaria sparsave. Peritheciis semi-immersis, subglobosis atris ( $\frac{1}{2}$  mm. diam.) poro pertusis. Ascis cylindraceis 4-8 sporis. Sporidiis ellipticis, 7 septatis muriformibusque, hyalinis demum flavido-fuscis ( $\cdot 04\text{--}\cdot 045 \times \cdot 015\text{--}\cdot 018$  mm.). Episorio crasso hyalino.

On bleached decorticated twigs of *Garrya*. California. Harkness (No. 2559).

**Venturia Arctostaphyli**, Cke. & Hark.

Amphigena, sparsa, atra. Peritheciis subglobosis, superficialibus, strigosis ( $\cdot 12\text{--}\cdot 15$ ) pilis rigidis acicularibus ( $\cdot 08$  mm. long). Ascis obclavatis, sessilibus octosporis, sporidiis ellipticis, utrinque rotundatis, vix constrictis, uniseptatis, flavidis ( $\cdot 012\text{--}\cdot 015 \times \cdot 005$  mm.).

On dead leaves of *Arctostaphylos*. California (No. 2552).

**Sphaerella acicola**, Cke. & Hark.

Sparsa, minuta, subinnata. Peritheciis globoso-depressis, membranaceis, fuscis. Ascis breviter clavatis octosporis, sporidiis clavato-

ellipticis, uniseptatis, hyalinis, flavidis ( $\cdot 007 \times \cdot 003$  mm.) uno loculo subgloboso, altero angustiore subconico.

On leaves of *Pinus*. Harkness (No. 2303).

**Sphaerella umbellulariae**, Cke. & Hark.

Hypophylla. Maculis suborbicularibus, confluentibusve et irregularibus, purpureo-brunneis, margine nigro-limitato. Peritheciis hinc illic aggregatis, semi-immersis, atris. Ascis clavatis. Sporidiis biserialibus, arcte ellipticis, uniseptatis, hyalinis ( $\cdot 015 \times \cdot 004$  mm.).

On fading leaves of *Umbellularia*. California (No. 2569.)

**Meliolopsis heteromeles**, Cke. & Hark.

Effusum, atrum. Mycelio subrustaceo, moniliformi, ramoso intertexto, *Capnodium* immixti. Peritheciis globosis ( $\cdot 2$  mm. diam.) membranaceis, liberis; ascis clavatis, octosporis; sporidiis lanceolatis, 3-5 septatis, hyalinis ( $\cdot 04 \times \cdot 008$  mm.).

On leaves of *Heteromeles*. California (No. 2425).

Mixed indiscriminately with *Capnodium Heteromeles*, of which it can scarcely be any condition.

**Capnodium heteromeles**, Cke. & Hark.

Effusum, atrum, subvelutinum. Hyphis densissime intertextis, ramosis septatis moniliformibusque. Peritheciis cylindraceo-ventricosis, erectis, subtenuibus, simplicibus ( $\cdot 2 \times \cdot 02$  mm.). Sporidiis incertis (potius triseptatis, muriformibus, fuscis  $\cdot 018 \times \cdot 009$ ).

On leaves of *Heteromeles*. California (No. 2425).

Only free sporidia seen, and hence uncertain.

**Capnodium Rhamni**, Cke. & Hark.

Maculæforme, atrum. Hyphis repentibus, plerumque moniliformibus, ramosis, strato tenui efformantibus. Peritheciis erectis cylindricis, sursum attenuatis ( $\cdot 3 \times \cdot 04$  mm.) simplicibus, ore fimbriato. Sporidiis ellipticis, triseptatis, fuscis ( $\cdot 018 \cdot 02 \times \cdot 008$  mm.) uno loculo transversaliter diviso. Conidiis liberis, fuscis, uniseptatis ( $\cdot 012 \times \cdot 006$  mm.).

On leaves of *Rhamnus*. California (No. 2482).

Evidently distinct from *Capnodium rhamnicolum*, Rabh.

**Capnodium tuba**, Cke. & Hark.

Effusum, crustaceum, atrum. Hyphis intertextis, ramosis, repentibus alterum septatis, alterum moniliformibus, crustam crassum deciduum efformantibus. Peritheciis erectis, numerosis cylindraceis ( $\cdot 12 \times \cdot 014$ ), sursum ciliato, divis, infundibuliformi expansis, conidiis (?) ovatis continuis hyalinis repletis. Asci nondum visi.

On *Umbellularia* leaves. California (No. 2395).

The whole crustaceous coating of the leaves flakes off in drying.

**Hypoderma eucalypti**, Cke. & Hark.

Epiphylla, gregaria. Peritheciis lanceolatis linearibus, erumpens, atris, opacis, labiis rotundatis, laxe connatis; ascis clavatis, sporidiis inordinatis, elongato-fusiformibus, continuis, hyalinis ( $\cdot 03 \times \cdot 003$  mm.).

On leaves of *Eucalyptus*. California. Harkness (No. 2402).

## DISCOMYCETES OF CALIFORNIA.

By W. PHILLIPS, F.L.S., AND DR. W. H. HARKNESS.

**Peziza (*Hymenoscypha*) *chloromela*, Phil. & Hark.**

Sparsa, vel congregata, stipitata (1 mm. long), glabra, atro-viridis, stipite pallidiori, disco plano, immarginato, luteo-viridi (.6 mm.). Ascis cylindraceo-clavatis, octosporis, sporidiis fusiformibus vel clavatis, plerumque curvulis, hyalinis, virido-tinctis (.02-.025 × .004-.005 mm.) paraphysibus filiformibus, indistinctis, adhærentibusque, gelatino hymenio granuloso.

On leaves of *Sequoia sempervirens*. California. Harkness (No. 1951).

**Peziza (*Pyrenopeziza*) *Heteromelis*, Phil. & Hark.**

Gregaria, erumpens, demum sessilis. Cupulis (.2-.5 mm.) sphaericis dein expansis, leniter scabrosis, atro-brunneis; margine serrato, disco fuligineo flavescente; ascis cylindraceo-clavatis. Sporidiis ellipticis (.01 × .005 mm.) flavotinctibus; paraphysibus filiformibus, ad apicem incrassatis, flavescens.

Underside of leaves of *Heteromeles arbutifolia*. California. Dr. Harkness (1987).

**Dermatea *Pini*, Phil. & Hark.**

Cæspitosa vel sparsa, subsessilis, globosa, demum patelliformis. ceraceo-coriacea, furfuracea, ochraceo-incarnata, margine indistincto, disco concolori, applanato. Ascis clavatis, octosporis. Sporidiis oblongo-ellipticis, 3-4 nucleatis (.017-.02 × .006-.008 mm.) paraphysibus linearibus, superne incrassatis, furcatis.

On *Pinus*. California. Harkness (2505).

**Dermatea *corni*, Phil. & Hark.**

Cæspitosa vel sparsa, minuta, primo tecta, demum erumpens, turbinata, furfuracea, vitellina, margine distincto; disco plano vel subdepresso, obscuriore. Ascis late clavatis. Sporidiis oblongo-ellipticis (.025-.03 × .008 mm.) paraphysibus filiformibus, superne clavato-incrassatis, furcatis.

On twigs of *Cornus*. California. Harkness (No. 2259).

**Stictis *Araucariae*, Phil. & Hark.**

Sparsa, immersa, demum erumpens, epidermide elongato-fissurato, cupulis discoideis vel subellipticis, disco pallide-cinereo, margine demum reflexo, albo. Ascis cylindraceo-clavatis. Sporidiis filiformibus (.05-.075 × .002 mm.) pluri-septatis, paraphysibus filiformibus, numerosissimis, furcatis.

On leaves of *Araucaria*. California. Harkness (No. 2524).

**Stictis *Megarrhizae*, Phil. & Hark.**

Gregaria, minuta, immersa (.1-.3 mm.) margine albo, crenulato; disco minime profundo, pallide flavo. Ascis cylindraceo-clavatis, octosporis. Sporidiis filiformibus (.075-.08 × .003 mm.) pluri-septatis; paraphysibus filiformibus.

On twigs of *Megarrhiza Californica*. California. Harkness (No. 2057).

**Phacidium nigrum**, *Cooke*.

Gregarium, hypophyllum, erumpens, in maculas nigras consociatum, demum laciniato-fissuratum (.1 mm. diam.) disco fuligineo. Ascis clavatis, octosporis. Sporidiis ellipticis, rectis, continuis, hyalinis (.013-.025 × .005-.007 mm.).

On underside of leaves of *Andromeda*. Darien, Georgia. Ravenel (No. 3211).

**Phacidium Heteromellis**, *Phil. & Hark.*

Gregarium, orbiculare, tectum, dein laciniato-laceratum, disco cinereo. Ascis clavatis vel cylindraceo-clavatis, octosporis. Sporidiis ellipticis (.01-.012 × .002-.003 mm.) paraphysibus filiformibus, superne incrassatis.

On underside of leaves of *Heteromeles arbutifolia*. California. Harkness. No 2124.

**Hysterium Eucalypti**, *Phil. & Hark.*

Sparsum vel gregarium (.5 mm.) minutum, ellipticum, rarissime striatum, erumpens, sessile; labiis clausis tumidis. Ascis clavatis. Sporidiis biseriatis, oblongis, plus minusve curvatis, tri-septatis, fuscis (.016-.02 × .004-.006 mm.).

On bark of *Eucalyptus*. California. Harkness (2405).

**Hysterium Lonicerae**, *Phil. & Hark.*

Sparsum vel gregarium, ellipticum vel oblongo-lanceolatum, (.5-12 mm. long) parallelum, prominulum, striatum vel læve, labiis prominulis, in ætate hiuleis. Ascis cylindraceo-clavatis, octosporis. Sporidiis ellipticis vel subpyriformibus, muriformibus, hyalinis, plerumque gelatinâ involutis (.02-.03 × .007-.011 mm.) paraphysibus indistinctis.

On decorticated *Lonicera*. California. Harkness (No. 2472).

**Hypoderma Heteromellis**, *Phil. & Hark.*

Gregaria, oblonga, rectis vel curvulis, applanata, vel leniter elevata (.4-8 mm. long). Ascis cylindraceis. Sporidiis filiformibus (.065 × .002 mm.) paraphysibus filiformibus.

On underside of leaves of *Heteromeles arbutifolia*. California. Harkness (2123).

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# Grevillea,

## A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY AND ITS LITERATURE.

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### ON FRIES' NOMENCLATURE OF COLOURS :\*

*An examination of the epithets used by him in describing the  
coloration of the Agaricini.*

BY HENRY THORNTON WHARTON, M.A.

The subject of colour-names is so vast and intricate that in the following paper I have confined myself to the consideration of those only which occur in Fries' description of the *Agaricini* in his "*Hymenomycetes Europaei*." Even in this restricted field I have found nearly 200 names of colours, although, with one or two exceptions, I have avoided reference to compound names; if I had considered the complete list that I originally made I should have had to describe about 840. Perhaps I have omitted some few as it is, for I have had to go over some 20,000 lines of concisely-written Latin to find those that I have gathered together for examination here.

In so long a list of names it is fortunate that not every one requires separate consideration. I have enumerated not only the colour-names used for descriptive purposes by Fries himself, but also most of those used as specific. And in making specific names there is a natural tendency to use a colour-name absolutely synonymous with another, simply from the fact of the most obvious one having been already used. For instance, a describer wishes to name a white species *Agaricus albus*; but when he finds that name is preoccupied, he names his species *Ag. candidus*. Still we need not conclude that he had the strict classical Latin differences of the two words in his mind's eye; he probably never thought that *Ag. albus* was so named because it was of a dead white, nor in speaking of *Ag. candidus* need he have meant to imply that it was of a glistening white, as Cicero might have done. This exigency has burdened the list of colour-names with a good deal of useless lumber, but the principle is one that, in the interpretation of specific names, must never be forgotten.

\* Read before the Woolhope Naturalists' Field Club, Oct. 13, 1884.

Another difficulty that constantly presents itself is the indefiniteness with which colour-names were used in classical times. In trying to make out what Fries intended to describe, we are continually hampered by a divergence from the ancient use of the very words he uses; and although the knowledge of each usage is necessary to a complete understanding of the subject, it is my endeavour here to make out the idea in Fries' mind, and only to that end to use the light that can be thrown on the subject from classical sources. Perhaps the best instance of the vague way in which the ancient Romans used the names of colours is to be found in a line by Albinovānus, a Latin poet contemporary with, and a friend of, Ovid's, who flourished about A.D. 28; he describes a woman's arms as whiter than the "purple" snow:

*Brachia purpureâ candidiora nive.*

Of course, "purple" here only means "glistening" or "dazzling," but such a use of words does not accord with modern ideas.

Much of the difficulty that surrounds the nomenclature of colours is also due to there being no authoritative code. In each branch of art or knowledge at the present day different names are used for the same colours. The "purple" of the cardinal is crimson; the "pink" of the huntsman is scarlet. An artist calls his colours by the names under which he buys them of his colour-man. But a milliner wants to invent a fresh name with each change of fashion, and the words we get from the fashionable journals are veritable marvels; couleur de crapaud mort, eau de Nile, elephant-grey, London smoke, mushroom-colour, being specimens. Fortunately "they have their day, and cease to be." An amusing instance was given me lately by an omnibus-driver. One of his passengers had been much struck by a pair of horses he had been driving, a dun and a strawberry-roan, in the horsey-man's language; the passenger, a tailor, described the one as "drab," and the other as a "claret-mixture."

Consequently mycologists must be a law unto themselves, and if we are willing to hold the illustrious Fries as our law-giver, we must study, not so much what colour-names *should* mean, as in what sense he used them.

Perhaps the only wonder is that there is such a limited number of colour-names after all. If we have a clear idea of a dozen colours, we must remember that we can get 479,001,600 permutations out of them, by mixing each with every other, even in similar proportions. For our names to be of any use we must group around each one those shades which most closely assimilate to the named type, and indicate their differences as far as we can by compound words, or qualifying adjectives, or suffixes, or affixes. We all have an idea of the colour of gold, for example, but look at a sovereign, together with a dozen pieces of jewellery made at various times and places, and you will soon see what a very comprehensive,

or, as the logicians say, extended, signification such a colour-name may have. And if a bright and definite colour may be so varied, how much more variable may a less pronounced one be!

Much has been written on the science of colours, but I know no book that deals at all exhaustively with their nomenclature. Field's "Chromatography" has a wide reputation among artists, but it is of little use to us. Neither is the classical work of Chevreul, the oldest professor in the world, who still, in his ninety-ninth year, lectures on chemistry in Paris.

We need not be much troubled about classification, for a very simple method is sufficient for our purposes. But it is as well to know how chromatographers ordinarily classify colours; and to this end I copy the following from one of the many editions of Field's book :—

Neutral	colours :	white, black.
Primary	„ :	yellow, red, blue.
Secondary	„ :	orange, green, purple.
Tertiary	„ :	citrine, russet, olive.
Semi-neutral	„ :	brown, maroon, grey.

I propose to group the whites and blacks with the greys that come between them; to range the oranges, citrines, and browns after the yellows; to include the russets and maroons as subordinate to the reds; to take the purples as variations of the blues; and to comprehend the olives under the greens. Sombre colours dominate so conspicuously among Fungi that we understand their coloration best by regarding their lowly hues as variants from types that owe their names to their very brilliancy. Their complications are so great that it is often difficult, even as it is, to refer them to their proper types; a trouble that was ever present to me when I preliminarily essayed to classify them.

I would begin with the whites and the blacks, and their intermediate greys; I at once discard the trammels that the chromatographers lay down for our deception, when they say that these, in their extremes, are no colours at all.

And first, of the *whites*. My list shows nineteen distinct terms for these. But most of them are made up on the principle that I have already laid down as of constant occurrence, viz., that they owe their appearance to the natural and obvious terms having been already used. The classical distinction of *albus* meaning a dead white, and *candidus* a shining white, has little prominence in Fries' description. To Fries, *albus* is white, and perfect whiteness admits of no qualification. If *albus*, as a specific name, is pre-occupied, *albellus*, *albescens*, *albidior*, *albidus*, and *albineus* can only express the idea of whiteness, but seem used rather for "whitish." *Albicans* and *candicans* should strictly mean "becoming white." *Argenteus* and *argyraceus*, are a silvery white, silvered. *Dealbatus*, white-washed or plastered, *cerussatus*, coloured with white-lead, and *argillaceus*, like white clay, seem to connote texture or surface along with whiteness. *Eburneus*, ivory-white,

*ermineus*, ermine-white, *niveus*, snow-white, and *virgineus*, virgin or pure white, have no more distinction than the English terms by which they are naturally translated.

Between the extremes of white and black there can be great varieties of greys, and the pure greys run into the blues and browns, so that they are best studied in three groups. Of the pure greys, *canus* and *incanus* are the nearest to white; just as we call white hair or a white horse "grey." *Cinereus* is the grey of wood-ashes, *cinerascens* is becoming such a grey; *griseus* seems to be a little darker, and *lividus* is darker still and inclining to brown. *Cretaceo-pallidus* is a pale chalky grey. *Nigrescens* and *nigricans* do not mean so much dark grey as a grey that turns black with age.

Of greys that incline to blue, *caesius* is the palest; it was the classical term for the blue-grey of the eye. *Glaucus* is a grey that inclines to green, and *glaucescens* denotes a paler shade of the same colour. *Livens* and *lividus* are bluish or leaden-grey, much like *molybdus* and *plumbeus*. *Ardosiacus* is a dull lead-colour. *Ag. (Collybia) tylicolor* and *Ag. (Omphalia) oniscus* seem to owe their specific names to their likeness in colour to a kind of cod-fish known as *oniscus*, and so mean rather a light grey, and not the dark slate-grey of the woodlouse we describe under the name of *Oniscus*. *Chalybaeus* is a steel or iron-grey; Fries, under *Cortinarius sciophyllus*, explains it as *caeruleo-fuscus*, dusky blue.

Of the brown-greys, *murinus*, mouse-colour, is the palest (cf. *Paxillus extenuatus*, Fries, p. 402). *Myochrous* should have the same signification, but is used by Fries for a dusky amber. *Argillaceus* is a light brownish ash-colour. *Fuscus*, dusky, is rather a vague term, but it is almost too brown to be classed under the greys at all; *fuscescens* means becoming dusky. *Ravidus* is a dark grey. *Fumosus*, *fuligineus*, and *fuliginosus* are best translated smoky, and not, as the latter might be, sooty black.

Pure blacks fortunately do not admit of much variation, although since an absolute black is rarely seen, several terms occur. *Ater* is strictly a lustreless black, and *niger* is a glistening black; *piceo-ater*, black as pitch, and *furvus*, swarthy, come into the former category; *coracinus*, raven-black, with a tinge of blue, into the latter. *Atratus* and *pullatus* mean simply "clothed in black." *Denigratus*, "blackened," is used for a dark dusky brown, and not black at all. *Nigerrimus*, "black as black can be," seems rather pleonastic, but Fries uses it in his descriptions (*Ag. Panaeolus hypomelas*, p. 313).

The next group, the yellows, under which I range the oranges, citrines, and browns, presents the greatest difficulties of all, and it is hard to get them into satisfactory order. Canon Du Port, in the interesting paper which we had the pleasure of hearing him read last year, cleared up many doubtful points, but his range was more limited than that which I set myself here.

The type of pale yellow seems to be *luteus*, like the flowers of

the plant woad (*Isatis tinctoria*). Paler than this are *luteolus* and *sulphureus*, sulphur-yellow. *Stramineus*, straw-coloured, denotes a paler and less pure yellow, Naples yellow, of which a deeper, duller shade is *cérinus*, *croceus*, saffron-yellow, being a fuller shade. *Citrinus* is our lemon-yellow, yellow of wax.

The type of full yellow is *flavus*, gamboge-yellow, which at its fullest brilliancy is *flavissimus*. *Flavidus* is a paler yellow, purer and richer than *luteus*. *Vitellinus*, like the yolk of an egg, is used by Fries, as the Canon reminded us last year, to describe the Chantarelle (*Cantharellus cibarius*). Not far off *flavus* is *aureus*, gold-coloured, which seems to me most like the Cadmium yellow of artists; its diminutive, *aureolus*, does not seem to be a very different shade. *Galbanus*, the colour of the gum galbanum, is a greenish yellow.

The orange-yellows, made up of yellow and red, not brown, are typically two; *aurantius* being a full orange, Cadmium orange, and *aurantiacus* a paler orange, containing less red. *Igneus* and *flammeolus*, denoting the colour of flame, and *fulmineus*, that of lightning, come in this place, but seem to have no very certain application.

*Persicinus* and *persicolor*, are difficult to describe more intelligibly than by peach-colour. *Armeniacus*, apricot-coloured, is explained by Fries as tawny-cinnamon (*fulvo-cinnamomeus*) or yellowish-tan (*helvolo-alutaceus*).

The browns are as extensive as the greys, and comprise every tint between impure yellow and the deepest burnt-umber. Their distinctions are best understood by grouping them into yellow-browns, red-browns, and true browns.

Of the yellow-browns *cinnamomeus*, cinnamon, a light yellowish brown, is the palest and most familiar. *Gilvus* is a yellower shade; *Ag. (Clitocybe) splendens* may be taken in illustrating the type of the colour, a yellowish tan, as it was formerly known as *Ag. gilvus*; classically, *gilvus* was an epithet of a dun or cream-coloured horse. *Alutaceus* has rather a wide signification, but it seems best translated by buff or tan. When it is lighter and yellower it is *helvolus*, the epithet of "white" wine and "white" grapes in Pliny: in describing *Cortinarius iliopodius*, Fries explains *helvolus* by *alutaceus*, but there must have been some distinction in his mind between the two terms, for he uses the compound, *helvolo-alutaceus* as "dusky cinnamon," a fact which appears to show that even Fries himself was not so clear in the application of colour-names as we should like to be. *Crustulinus* seems to be the colour of toast, much darker and warmer than that of a cracknel-biscuit. *Ochraceus* is yellow-ochre, and *melleus*, honey-yellow, is dingier and less yellow; *luridus*, sallow or wan, is still paler and less yellow, almost like that which builders call "stone-colour." *Rhabarbarinus* is the light brownish yellow of Turkey rhubarb. *Isabellinus* is a light brownish-yellow or dirty cream-colour. The word has a history, and was first used of unwashed linen. The

Infanta of Spain, daughter of Philip II., made a vow in 1601 that she would not change her linen until her husband had taken Ostend; as that city did not fall till three years after, she must have saved her washing-bill at the price of some discomfort.

Fawn-colour does not fall very conspicuously into any of my three divisions of browns, but most of us know the hue so denoted; *cervicolor*, *cervinus*, and *hinnuleus* all seem to mean much the same. *Cervinus* is applied to the darkest shade, and Fries explains *hinnuleus* as a tawny-cinnamon (p. 380).

The brownish ochrey yellow colour known to artists as "gall-stone," only with an inclination to a dirty green, is denoted by *ictericus* or *icterinus*.

The brightest of the red-browns is *lateritius*, the colour of old red tiles; its paler shade, that of *Ag. (Hypholoma) sublateritius* is familiar to us all. *Testaceus*, brick-coloured, is a reddish brown or rusty bay, almost Venetian red. *Fulvus* is tawny, the colour of a lion, and is also known as *leoninus* or *leochromus*; *fulvellus* seems to be paler and redder, and very like that which gives its name to *Ag. (Collybia) nitellinus*, dormouse-colour. *Helvus* is a light bay or "cow-colour," like *vaccinus*. *Badius* is a reddish-brown, the colour of a "bay" horse; *spadiceus*, date-brown, is a duller and darker shade. *Hepaticus*, liver-coloured, is a darker and redder brown than bay. *Ustalis* denotes a warm reddish bay, between red-ochre and brown-madder.

Of the true browns, the type is *brunneus*, Vandyke-brown. *Coffeatus*, like roasted coffee, is very similar. *Ligneobrunneus* is a lighter or wood-brown. The apparently extinct *Ag. (Lepiota) Pauletii* is described by Fries as *colore "de noisette,"* which must mean a light nut-brown or hazel. *Umbrinus* is a dark brown, brown umber, the colour of a "brown" horse; indeed, the scale of colours used in describing horses, from dun through chestnut, bay, and brown to black, shows how, in ordinary language, the name of a colour is always taken as of a very extensive connotation, because it is hard to decide where one colour ends and another begins.

We now come to the reds and their varieties. The palest is *carneus*, with *carneolus* and *incarnatus*, flesh-coloured. *Hyasginus* is a more distinctly red flesh-colour. *Roseus* and *rosaceus* imply a rosy pink; *rosellus* seems to mean inclined to pink. There must be some difference between the shades of scarlet or vermillion distinguished as *cinnabarinus* and *miniatus*, because each is compounded with the other as *cinnabarinominiatus*, but I have not succeeded in finding out what the difference is. *Coccineus*, cochineal red, is a deeper scarlet, carmine. *Sanguineus*, blood-red, is nearly similar. *Rufus*, *ruber*, and *russus* are less pure reds. *Rubescens* is merely becoming red. *Rubellus*, *rufidulus*, and *rufulus* are reddish. *Rubens* is a brick-red; *rutilus*, *rutilans* a purplish brick-red. *Vinaceus* is reddish rather than claret-coloured, but it does not seem to be ever used in descriptions. Less pure reds

are *castaneus*, chestnut; *ferrugineus* and *rubiginosus*, rust-red; and *puniceus*, which is an almost purple red.

Blues are so rare among Fungi that very few names are required for them. *Cæruleus* is a pale blue, azure; *cærulescens* is becoming blue. *Azureus*, *lazulinus*, and *cyaneus* are rather ultramarine. *Cyanellus* is almost sky-blue. *Purpureus* is a bluish purple; *violaceus*, violet, is a reddish purple; *lilacinus* is lilac or mauve. *Ianthinus* and *tonides* alike refer to a violet colour. *Porphyroleucus* should mean purplish-white, but *Ag. (Tricholoma) porphyroleucus*, Bulliard, is described by Fries as "sooty or dusky, becoming red."

The type of the greens is *viridis*, but it is of no definite hue; *virescens* and *viridans* mean turning green. *Aerugineus* and *aeruginosus* refer to a verdigris or rather bluish-green. *Olivaceus* is olive-green, *olivascens* denoting the preliminary stage of becoming green. *Pausiæcus* describes precisely the same green, from *pausæa* or *pausia*, a variety of olive; for Fries says of *Ag. (Clitocybe) pausiæcus* that the gills are olivaceous.

Before I had made the attempt of which you have the outcome now, to elucidate Fries' use of the names of colours, I was unwilling to ask for much of your indulgence. But now that I have done my best, and feel how poor my best has been, I must ask you to look on my essay, not as a final determination, but as a framework about which can be arranged the experience of others. No invention is ever so valuable to its inventor as it is to those who can bring it to perfect use. May what I have tried to accomplish here be at least the opening of the door for the truth that must in the end prevail.

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### BRITISH DISCOMYCETES.

We omitted in our last issue to announce that Mr. W. Phillips, F.L.S., of Shrewsbury, is preparing for issue a work containing full descriptions of all the genera and species of the British Discomycetes, which will virtually be a revised edition of that portion of our "Handbook of British Fungi." We need not remind our readers that no one more capable to undertake this duty could be found, as Mr. Phillips has devoted himself with untiring perseverance to the critical study of the Discomycetes, and especially those of our own islands, for many years. Unhesitatingly we have placed all our own material at his disposal, with the offer of any assistance which we can give him, and we have no doubt the work will be prosecuted with vigour.

It will be issued in one volume, cloth, and will not exceed ten shillings; but in order to its publication, if possible, at a lower price, the names of subscribers are solicited, which should be sent forthwith to Mr. W. Phillips, Canonbury, Shrewsbury, from whom prospectus and any further details may be obtained.



## DEMERARA - FUNGI.

The following is an enumeration of a collection of Fungi from Demerara, recently exposed at the Forestry Exhibition at Edinburgh, and now transferred to the Royal Herbarium at Kew :—

**Lentinus velutinus**, Fr.

**Lenzites applanata**, Fr.

**Polyporus (Mesopus) rugosus**, Nees.

**Polyporus (Mesopus) pansus**, Berk.

It seems almost impossible to indicate any line of separation between *P. pansus*, B., and *P. camerarius*, B.

**Polyporus (Pleuropus) fiabelliformis**, K.—Large form, with the stem nearly obsolete.

**Polyporus, (Pleuropus) lucidus**, Fr.

**Polyporus (Pleuropus) sanguineus**, Fr.

**Polyporus (Fomes) australis**, Fr.

**Polyporus (Fomes) rimosus**, Berk.

**Polyporus (Fomes) lateritius**, Cooke.

**Polyporus (Fomes) ligneus**, Berk.

**Polyporus (Fomes) fraxineus**, Fr.

**Polyporus (Fomes) marmoratus**, Berk.—This is the same as the *Polyporus fasciatus* (Fries), of the Kew Herbarium, but *not* the *Polyporus fasciatus* (Fr.) of the Berkeley Herbarium.

**Polyporus (Merismoides) senex**, Nees.

**Polyporus (Fomes)**——— ?

A resupinate form of some large species, which it is difficult to identify.

**Polyporus (Fomes) sulcatus**, Cooke.

Pileo durissimo, convexo-plano, reniforme, glabro, opaco, umbrino, concentrice dense profundoque sulcato, cute crasso indurato ; contextu albo, fuligineo maculato ; tubulis abbreviatis, stratosi, albidis ; poris rotundatis, minutis, albis, dissepimentis crassiusculis. Hymenio convexo, margine sterili.

On trunks. Demerara.

Pileus 6-9 inches across, 1½ in. thick behind, gradually attenuated to the somewhat acute margin.

**Polyporus (Fomes) geotropus**, Cke.

Pileo suberoso-lignoso, durissimo, incrustato, concentrice sulcato, radiato-rugoso, postice subtuberculoso, glabrato, pallido ; margine acuto, incurvo ; contextu albo ; tubulis abbreviatis stratosi, poris minutissimis, rotundis, albis pallescentibus.

On trunks. Demerara.

Pileus 4 to 10 inches broad, 1-2 inches thick behind, substance not fibrous or zoned, allied to *P. ulmarius*, somewhat resembling large coarse specimens of *P. auberianus*, M. in habit, but more friable, and very subject to the attack of insects.

**Polyporus (Funales) trichomallus, B. & Mont.**

**Polyporus (Polystictus) hirsutus, Fr.**

**Polyporus (Polystictus) cervino-nitens, Schwz.**—This is most closely allied to *P. albo-cervinus*, Berk. ; so close that some of the forms seem to possess the characters of both. In our opinion the species of *Polyporus* require a most careful revision.

**Dædalea sprucei, Berk.**

**Stereum hydrophorum, Berk.**

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### FUNGUS FORAYS, 1884.

**HACKNEY NATURAL HISTORY SOCIETY.**—The Foray of this Society was made on Saturday, 27th September, to Epping Forest. Although the general Foray did not commence till after noon, some of the members were on the ground and commenced the search early in the morning. It was expected that the dry season would have its effect in limiting considerably the number of fungi to be found, and this was in reality the case, for long walks had to be taken in order to secure a very limited number of species. Most of the baskets contained only common species, but two interesting additions to the British Flora were determined. One of these was *Hydnum diversidens*, Fr., found by Mr. H. T. Wharton and Mr. J. C. Webb, on a trunk near Fairmead; the other was *Boletus duriusculus*, Kalch., an ally of *Boletus scaber*, and probably may have been confounded with it in times past. After tea at Fairmead Lodge, the specimens were laid out in an ante-room, and examined leisurely by the party, information concerning them being furnished by the President, and Messrs. Worthington Smith, H. T. Wharton, and James English.

**ESSEX FIELD CLUB.**—Two days having been selected for the Foray this year, the members met at Loughton on Friday, October 3rd, and, accompanied by the Rev. Canon Du Port, Mr. W. Phillips, of Shrewsbury, Mr. Worthington Smith, and M. C. Cooke, proceeded towards Monk's Wood, in Epping Forest, then through other portions of the Forest, reaching Buckhurst Hill in the afternoon, when the specimens were arranged on tables in the large ball-room of the "Roebuck," and duly named, labelled, and classified, Mr. T. Howse having sent *Hydnum erinaceum*, and *Boletus aurantiporus*, and other species, from Guildford. On the following day other portions of the Forest were explored, terminated by a tea at five o'clock, and a meeting thereafter, at which the results of the two days' Foray—as far as they could be ascertained at the time—were reported, and Mr. Worthington Smith read a paper on the "Politics of the Potato-Fungus." Notwithstanding that the season was unfavourable, a good exhibition was made, and a great number of visitors were clustered around the tables until a late hour. The Rev. J. M. Crombie exhibited

an excellent collection of the Lichens of Epping Forest, and a large number of microscopes at a central table displayed objects allied to the subject of the day in a most efficient manner. Between 20 and 30 species, not before recorded, were added to the Epping Forest Catalogue.

LEICESTER PHILOSOPHICAL SOCIETY.—The first Fungus Excursion of the Biological Section of this Society was made in Charnwood Forest on Wednesday, October 8th. The morning was by no means promising, and consequently but few members came to the starting post. About noon the rain began a continuous drizzle, which, by 3 p.m., settled into a regular downpour. Foraging had to be conducted for some time under considerable difficulty, and finally abandoned. No rare species were met with, but an accurate list was kept of all that were examined and determined during the day, so that, in the evening, when the results were compared, it was found that some forty species had been added to the list of the Fungi of Leicestershire. The sole lady of the party exhibited some very characteristic sketches which she had made of several species of *Agaricini*, and we then, as now, entreated her to persevere, and, by so doing, perform good service for Leicestershire botany.

THE WOOLHOPE CLUB FORAY.—The usual week at Hereford commenced on October 13th, and the first excursion to Leominster for Croft Ambury on the 14th. The walk was pleasant, the weather and company agreeable, and the view extensive and picturesque; but many of the baskets remained almost empty, most of the time being occupied in marching up a hill and then marching down again. On the 15th a short excursion to Haywood Forest was much more satisfactory in its results. On the 16th the general excursion was to Dinmore, where the beautiful *Cortinarius triumphans* was found, again under birches, the only previously known locality being Haywood Forest. On October 17th. the last, and worst, excursion was made in Eastnor Park, near Ledbury. During the evenings the following papers were read at the soirées:—"Notes on the Edible Fungi of North Italy," by A. S. Bicknell; "On Colour Nomenclature in Fungi," by H. T. Wharton, M.A.; "British Species of *Nidularia*," by W. Phillips; "The Spermogonia of the Uredines," by C. B. Plowright; "Researches into the Oospores of some Fungi," by the Rev. J. E. Vize, M.A.; "On Bunt," by C. B. Plowright; "Recent Views on the Lamellæ of the *Agaricini*," by the Rev. J. E. Vize, M.A.; "Some Recent Additions to our Mycologic Flora," by W. Phillips, F.L.S.; "Trinomialisism in Zoology," by H. T. Wharton, M.A.; and "Some Gigantic Fungi," by M. C. Cooke.

The week was conspicuously deficient in novelties, which were chiefly confined to those sent from a distance. A. O. Walker, Esq., of Chester, sent a box of specimens from North Wales, which contained nothing rare. H. T. Wharton exhibited *Agaricus*

*Elvensis* from Kingsbury. W. G. Smith sent *Hydnum coralloides* from Newark. C. Bucknall brought *Cortinarius papulosus* from near Bristol. T. Howse also sent a box of specimens from Guildford. Excepting *Ag. melleus*, the white-spored Agarics were very scarce.

*Polyporus intybaceus* was found for the first time in Herefordshire. *Geaster fimbriatus* occurred plentifully in Eastnor Park. *Lactarius flexuosus* was again found in Haywood Forest. *Hygrophorus cossus* rather plentifully at Dinmore, but novelties were conspicuously absent, and critical discussion unusually wanting in vigour for lack of material. Some of the sub-genera were not represented by a single species.

Very large specimens of *Agaricus melleus* were measured in Haywood Forest, ten, and ten-and-a-half, inches in diameter of the pileus. Curious malformations of the same ubiquitous species were found at Dinmore.

HERTFORDSHIRE NATURAL HISTORY SOCIETY.—The Cryptogamic Meeting and Fungus Foray in the neighbourhood of St. Albans was held on Saturday afternoon, November 1st. The leaves had been falling briskly for two or three days, and consequently covered many of the few species of Fungi on the ground. Two or three small woods and Gorhambury Park were explored, but only 43 species were recorded, of which 15 had not been recorded for previous Forays. Nearly all the Fungi found were of common species, and these represented by few individuals. The most noteworthy species was *Agaricus (Collybia) longipes*, Bull. Numerous specimens of *Agaricus (Tricholoma) personatus*, in excellent condition, were taken from Gorhambury Park, and operated upon afterwards to test their esculent qualities, as also were several individuals of *Ag. (Tricholoma) nudus*, in both cases with satisfactory results. The Fungi found at the Foray were determined by M. C. Cooke and Worthington G. Smith.

These are the only Forays of which we are enabled to report from personal observation. The general impression in all localities is, undoubtedly, that the number of Fungi seen was far inferior to that of very many previous years. Some say "the worst for twenty years."

### DISEASES OF FIELD AND GARDEN CROPS.\*

This little volume, which is published at the low price of four shillings and sixpence, should be in the hands of every farmer and gardener, as well as every student of Fungi. It presents in a handy and popular form a careful digest of what is known, and what is supposed to be known, of the principal diseases of plants caused by Fungi. Originally delivered as lectures to the Institute of Agriculture at the British Museum, and since carefully revised

\* Diseases of Field and Garden Crops, chiefly such as are caused by Fungi; by Worthington G. Smith, F.L.S., with 143 figures. Macmillan and Co.

and somewhat extended, this volume is intended for practical agriculturists, and appears to set forth with fairness the arguments on both sides in certain vexed questions which enter into the subjects discussed. Of course it is not difficult to see in which direction the writer's own opinions tend, but there is no personality, and no assumption of dogmatism, or any attempt to sneer at and quarrel with those from whom he feels bound to differ. On the whole we feel prepared to endorse the views, deemed in some quarters heretical, which the writer favours, and though sometimes it has been our honour to be linked together as a "pair of heretics," the opprobrium has not yet convinced either of his error, or induced a desire to recant. Time is on our side, and we are content to wait.

We cannot enumerate the thirty-eight chapters into which the book is divided, but in it will be found Potato Diseases, Onion and Cabbage Diseases, the Corn Mildews, Ergot of Grain, Smut, and many others, all profusely illustrated, and described in plain language, so as to require no glossary.

It is not our intention to enter upon any of the subjects here treated, since we have neither time nor inclination for that particular "vanity and vexation of spirit" denominated controversy. No additional progress has been made in the arguments during some years, in spite of the volumes of "words" which have been written. The premises are the same, the deductions are the same, the missing links, and the fallacious conclusions, are all as they were, it is only variations that have been played, but the fundamental tune is the same. "We cannot believe a proposition only by wishing, or only by dreading, to believe it," says Mill,\* and further he adds, for the benefit of such as seek to do it, that "it makes him shrink from the irksome labour of a rigorous induction, when he has a misgiving that its results may be disagreeable; and in such examination as he does institute, it makes him exert that which is in a certain measure voluntary, his attention unfairly, giving, a larger share of it to the evidence which seems favourable to the desired conclusion, a smaller to that which seems unfavourable. It operates, too, by making him look out eagerly for reasons, or apparent reasons, to support opinions which are conformable, or to resist those which are repugnant, to his interests or feelings; and when the interests or feelings are common to great numbers of persons, reasons are accepted and pass current, which would not for a moment be listened to in that character if the conclusion had nothing more powerful than its reasons to speak in its behalf. The natural or acquired partialities of mankind are continually throwing up philosophical theories, the sole recommendation of which consists in the premises they afford for proving cherished doctrines, or justifying favourite feelings; and when any one of these theories has been so thoroughly discredited as no longer to serve the purpose, another is always ready to take its place. This propensity, when exercised in favour

\* "System of Logic," p 483.

of any widely-spread persuasion or sentiment, is often decorated with complimentary epithets; and the contrary habit of keeping the judgment in complete subordination to evidence, is stigmatised by various hard names, as scepticism, immorality, coldness, hard-heartedness, and similar expressions, according to the nature of the case."

People may be educated in some things, but they are not made logicians by Act of Parliament. Logic is not one of the fashions of the age in which we live, or some of the sophistries we hear of would have a "short life and a merry one."

### SPHÆRIACEÆ IMPERFECTÆ COGNITÆ.

Under this heading in Saccardo's Sylloge, he enumerates no less than 420 species of which the fructification was unknown to him. Whether this list might not with little trouble have been considerably reduced, we will not stay to enquire. Suffice it to say that we have taken the first 89 species, belonging to the *Compositæ*, and subjected them to examination, with the following result.

We are indebted to Mr. W. C. Stevenson, of Philadelphia, for the determination of some of the species in the Schweinitzian Herbarium, for which we had not access to authentic specimens. The numbers at the left refer to the corresponding numbers in the "Sylloge."

4126. *Rosellinia pardalios*, B. & C., *Herb. Berk.*, No. 8691.

Sporidia elliptical, brown, .008 mm. long.

4129. *Diatrype pilulifera*, *Schwein. in Herb. Berk.*, No. 8727.

Hardly appears to be the species of Fries. There is no "collum longum attenuatis."

4131. *Diatrype euphorea*, *Fr.*, *Herb. Berk.*, 8731.

Sporidia allantoid .01 mm. long.

4132. *Diatrype rhois*, *Schwein. Herb. Berk.*, No. 8735.

Sporidia allantoid .0075-.008 mm. long.

4133. *Valsaria Robinia*, *Schw. in Herb. Berk.*, No. 8728.

Sporidia elliptical, uniseptate, brown .02 mm.

4134. *Diatrype virescens*, *Schwein. Herb. Berk.*, No. 8730.

Sporidia allantoid, pale fuscous, .008 mm.

4137. *Diatrype smilacicola*, *Schwein in Herb. Berk.*, No. 8739. *Sacc. Syll.*, No. 739.

Sporidia allantoid, .012-.014 mm. long.

4142. *Diatrype concolor*, *Schwein. Herb. Berk.*, No. 8746.

Sporidia allantoid, .0075-.008 mm. long.

4143. *Diatrype albo-pruinosa*, *Schweinitz*.

Sporidia allantoid, pale fuscous, .02-.022  $\times$  .004 mm.

4144. *Cryptospora corylina*, *Fckl. Sphæria versatilis*, *Fries. Herb. Berk.*, No. 8759. Specimen from *Schweinitz*.

Sporidia cylindrical, flexuous, nucleate, hyaline, .05 mm. long.

4145. *Diatrype sordida*, Pers. Herb. Berk., No. 8752.  
Sporidia allantoid  $\cdot 012$  mm. long.
4147. *Fuckelia gastrina* = *Sphæria irregularis* (Fr.) in Herb. Berk.
4149. *Sphæria griseo-tecta*, B. & Br. Herb. Berk., No. 8779.  
Villose and byssoid, not a *Diatrype*; asci clavate, sporidia biserial, cylindrical, hyaline, flexuous,  $\cdot 04 \times \cdot 003$  mm.
4150. *Diatrype friabilis* (Pers.) ex. herb. Schweinitz in Herb. Kewensis.  
Sporidia allantoid  $\cdot 01$  mm. long.
4153. *Diatrype variolosa*, Schwein. in Herb. Berk., No. 8778.  
Sporidia allantoid  $\cdot 007 \cdot 008$  mm. long.
4154. Only a *Sphæropsis* under the name of *Sphæria subconfluens*, Schw., in Herb. Berk., No. 8777.
4155. *Diatrype sambucivora*, Schweinitz in Herb. Berk., No. 8775.  
Sporidia allantoid  $\cdot 008$  mm. long.
4156. *Diatrype collecta*, Schwein. in Herb. Berk., No. 8776.  
Only minute stylospores found.
4157. *Diatrype annulans*, Schweinitz in Herb. Berk., No. 8774.  
Sporidia allantoid  $\cdot 008$  mm. long.
4160. *Eutypa oppansa*, Fries in Herb. Berk., No. 8822. Specimen from Schweinitz.  
Sporidia allantoid, about  $\cdot 01$  mm.
4166. *Eutypa mori-rubra*, Schweinitz in Herb. Berk., No. 8826.  
Sporidia cylindrical, scarcely curved, pale fuscous,  $\cdot 008$  mm. long.
4167. *Eutypa mela*, Schweinitz in Herb. Berk., No. 8793.  
Apparently not distinct from *E. maura*.
4168. Apparently an *Eutypa*, but without fruit, Herb. Berk., 8825.
4169. *Eutypa elevans*, Schweinitz in Herb. Berk., No. 8817.  
Sporidia allantoid  $\cdot 008$  mm. long.
4170. *Eutypa denigrata*, Schwein. in Herb. Berk., No. 8813.
4171. *Eutypa confusa*, Schweinitz in Herb. Berk., No. 8817, 8819.  
Ostiola rugose, sporidia allantoid.
4172. *Diaporthe conrescens*, Schweinitz in Herb. Berk., No. 8815.  
Sporidia fusiform, quadri-nucleate, then uniseptate  $\cdot 012$  mm. long.
4173. *Valsa juglandicola*, Schweinitz in Herb. Berk., No. 8846.  
Sporidia allantoid,  $\cdot 006 \times \cdot 002$  mm.
4175. *Sphæria pugillus*, Schw. in Herb. Schweinitz, is a *Sphæronema*.
4177. *Valsa Salleti*, Berk. in Herb., No. 8864.  
Sporidia allantoid, hyaline, very minute.
4178. *Valsa Cathartocarpi*, Lev. in Herb. Berk., No. 8860.  
Sporidia allantoid, hyaline  $\cdot 01 \times \cdot 003$  mm.
4180. *Valsa variolaria*, Schweinitz in Herb. Berk., No. 8958.  
Sporidia allantoid  $\cdot 0078 \times \cdot 0032$  mm.
4181. *Valsa rubincola*, Schweinitz in Herb. Berk., No. 8848.  
Sporidia allantoid  $\cdot 01$  mm. long. In Herb. Schweinitz, sporidia  $\cdot 009 \times \cdot 002$  mm.
4182. *Valsa radicum*, Schweinitz in Herb. Berk., No. 8850.  
Sporidia allantoid  $\cdot 01$  mm. long.

4183. *Valsa quadrifida*, Schwz. Amer. Bor., 1878.  
Sporidia allantoid, hyaline,  $\cdot 009 \times \cdot 0032$  mm.
4184. *Valsa (valsella) papyrifera*, Schweinitz in Herb. Berk., No. 8959.  
Sporidia allantoid, numerous, minute.
4185. *Cytispora* only, under, *Sphæria oligostoma*, Schwein. in Herb. Berk., 8852, and sterile in Herb. Schweinitz.
4186. *Valsa modesta*, Schwein. Amer. Bor., No. 1337.  
Sporidia allantoid  $\cdot 0078 \times \cdot 0032$  mm.
4187. *Valsa indistincta*, Schweinitz in Herb. Berk., No. 8960.  
Sporidia reniform, hyaline,  $\cdot 006 \times \cdot 0045$  mm.
4188. *Valsa (Eutypella) Halseyana*, Schwein. in Herb. Berk., No. 8855.  
Sporidia allantoid  $\cdot 008$  mm. long.
4189. *Valsa (Eutypella) goniosstoma* (Schweinitz).  
Sporidia allantoid, hyaline  $\cdot 007 \times \cdot 002$  mm.
4190. *Valsa frustum-coni*, Schwein. in Herb. Berk., 8854.  
The small specimen furnished only a *Cytispora* with minute spores.
4191. *Valsa conseptata*, Schweinitz in Herb. Berk., No. 8952.  
Sporidia allantoid, hyaline,  $\cdot 0083 \times \cdot 0032$  mm.
4192. *Valsa ceanothi*, Schweinitz in Herb. Berk., No. 8961.  
Sporidia allantoid,  $\cdot 02 \times \cdot 006$  mm.
4193. *Valsa conspurcata*, Schweinitz in Herb. Berk., No. 8849.  
Sporidia allantoid, hyaline,  $\cdot 006 \times \cdot 002$  mm.
4194. *Valsaria Bignonis*, Schweinitz in Herb. Berk., No. 8856.  
Sporidia olive brown, uniseptate,  $\cdot 015 \times \cdot 008$  mm.
4195. *Aglaospora profusa*, or scarce different, as *Sphæria amor-phostoma*, Schweinitz in Herb. Berk., No. 8851.
4196. *Eutypa allostoma*, Schweinitz in Herb. Berk., No. 8853.  
Sporidia allantoid,  $\cdot 009 \times \cdot 003$  mm.
4198. *Valsa aractina*, Fr. in Herb. Berk., No. 8845, ex-herb Fries.  
Sporidia allantoid,  $\cdot 01$  mm. long.
4201. *Valsa deformis*, in Herb. Schweinitz.  
Sporidia allantoid, hyaline,  $\cdot 006\text{--}\cdot 008 \times \cdot 0015$  mm.
4203. *Cryptospora vasculosa*, in Herb. Schweinitz.  
Sporidia cuneate, nucleate,  $\cdot 008 \times \cdot 012$  mm.
4208. *Valsa (Quaternaria) abnormis*, Fries., fide Schweinitz, Herb. Berk., No. 8989.  
Sporidia allantoid, hyaline, minute.
4210. *Sphæria (Cryptospora) umbilicata*, Pers. Herb. Berk., No. 8986,  
is without fruit.  
Sporidia oval, hyaline  $\cdot 0062 \times \cdot 005$  mm. in Herb. Schweinitz.
4211. *Eutypa dimorpha*, Wallr. in Herb. Berk., No. 8816.  
Sporidia allantoid, hyaline,  $\cdot 005$  mm. long.
4213. *Valsa expers*, Schweinitz in Herb. Berk., No. 8990.  
Sporidia allantoid,  $\cdot 02$  mm. long. In Herb. Schweinitz  $\cdot 018 \times \cdot 016$  mm.
4214. *Valsa rimicola*, Schweinitz in Herb. Berk., No. 8985.  
Sporidia allantoid,  $\cdot 0065$  mm.
4215. *Valsa rhizina*, Schweinitz in Herb. Berk., No. 8988.  
Sporidia allantoid,  $\cdot 009 \times \cdot 003$  mm.



The following two species appear to have been omitted, as we fail to trace them in the Index :—

**Valsa aperta**, *Fr. Syst.* II. 407., *Schwein. Amer. Bor.*, No. 1381.

Circinata, perithecia exigua, cortici interiori immersa, subinde irregulariter aggregata, superne crusta tegente juncta. Ostiola peritheciis duplo longiora, erumpentia, primo pro more convergenti a dein erecta, apice perforata. Ascis clavato-cylindricis. Sporidiis allantoides, hyalinis  $\cdot 018 \times \cdot 006$  mm.

In ramis *Populinis*.

**Valsa (Cryptosporella) divergens**, *Schweinitz. Sphaeria divergens* *Schwein. Syn. Car.*, 123, *S. (circinata) divergens*, *Schw. Amer. Bor.*, No. 1393.

Receptaculum tumidiusculum, cæspes sphæularum 2-4 lineas diametro æquans suborbicularis, cingitur epidermide. Sphæulæ atræ vel cinerascens, ostioli teretibus longissimis s. sphæula sua triplo longioribus, divergentibus. Ascis octosporis; sporidiis subellipticis, hyalinis,  $\cdot 002 \times \cdot 007$  mm., endochromate granuloso.

In ramis *Liquidambaris* dejectis.

## BRITISH FRESH WATER ALGÆ.

This work is now complete in two volumes, cloth, gilt tops. There are only a very limited number of copies left, of which the published price is £4 10s.

Since the appearance of the last part we have been apprised by Mr. F. Bates, of Leicester, of the discovery of *Cedogonium excisum* (page 157) in Leicestershire. The only previous locality recorded in these islands was Ireland. Also another closely-allied species, not referable to any yet recorded as British, but not at present satisfactorily determined.

From time to time we shall endeavour to announce all additions, of which we are assured, in the pages of this journal.

## SOCIÉTÉ MYCOLOGIQUE.

We have received a prospectus of this Society, which it is proposed to establish in France, with our friends Dr. Quelet as President, and M. Boudier as Vice-President. This Society is to be composed of French members and foreign members, and is to be divided into four sections, besides a section for the colonies, each section to have its own mycologic Session, and a general session annually. Annual subscription ten francs for members, and five francs for corresponding members; to each, in proportion, the publications of the Society will be sent. The Secretary is Dr. A. Mougeot, Bruyeres, Vosges, France. All persons giving in their adhesion to the programme before the 30th December will be entitled Founders.

## SYNOPSIS PYRENOMYCETUM.

(Continued from p. 16.)

Notwithstanding that it is a severe tax upon our fully-occupied time, we have endeavoured to proceed with the examination and revision of the *Pyrenomyces* embodied in Saccardo's "Sylloge." Present observations will be confined to the *Dothideaceæ*, although it is impossible to complete that family in the present number. First of all we will endeavour to clear the way by excluding a number of species which it would be folly to retain under the name of *Dothidea*, in the hope of some perfect form being found at a very remote time. There is no doubt that the genus *Dothidea* was somewhat imperfectly understood by Schweinitz and others, since *Diplodia* and *Sphæropsis* as well as *Dothiora* were often included in it.

A very unprofitable examination of the following authentic specimens from Schweinitz in the Berkeley Herbarium may be accepted as a sufficient reason for excluding them all from any enumeration of the species of *Phyllachora*:—

5161. *Dothidea orbiculata*, Schweinitz. Herb. Berk. No. 9249.  
Asci not seen. Stylospores subcylindrical,  $\cdot 022 \times \cdot 003$  mm.
5163. *D. Rhoeis*, Schweinitz. Herb. Berk. No. 9202.  
No fruit.
5167. *D. Lauri-Borbonis*, Schw. Herb. Berk. 9242.  
Imperfect. No fruit. Perhaps *Asteroma*.
5168. *D. juglandicola*, Schw. Herb. Berk. 9271.  
Is a *Pilidium*. Stylospores strongly arcuate, hyaline,  $\cdot 012 \times \cdot 003$  mm. Perithecia membranaceous.
5169. *D. sassafras*, Schw. Herb. Berk. 9270.  
Perhaps an *Asteroma*, but without fruit.
5172. *D. Rosæ*, Schw. Herb. Berk. 9276.  
Is the common *Asteroma Rosæ*, Fr.
5173. *D. maculans*, Schw. Herb. Berk. 9274.  
Only consists of sterile brown spots.
5174. *D. Castaneæ*, Schw. Herb. Berk. 9275.  
Only discoloured spots. No indication of being a *Dothidea* in a young state.
5175. *D. lauricola*, Schw. Herb. Berk. 9273.  
Spots resembling *Ectostroma*, without fruit.
5177. *D. glycineos*, Schw. Herb. Berk. 9255.  
Small, irregular, submembranaceous perithecia, without fruit. Either *Phyllosticta* or *Phoma*.
5178. *D. conspurcata*, Berk. Herb. No. 9114.  
Without fruit, probably an immature *Asterina*.
5182. *D. Barringtonis*, Berk. & Br. Herb. Berk. 9099.  
Small ostiolate perithecia, without fruit. It is probably a *Phoma*.

5183. *D. Musæ*, Klotzsch.

Is the same species as recorded under No. 5243.

5185. *D. brachystemonis*, Schwein. Herb. Berk. 9251.

No trace of fruit.

5188. *D. Xanthii*, D. C.—There is every reason for considering this to be *Puccinia Xanthii*, Schw.

5190. *D. exasperans*, Schw. Herb. Berk. 9252.

Perithecia membranaceous. *Phyllosticta exasperans*. Spores  $\cdot 006 \times \cdot 0015$  mm.

5197. *D. Gentianæ*, Schw. Herb. Berk. 9201.

Perithecia distinct, submembranaceous, gregarious. Spores narrowly elliptic,  $\cdot 008\text{--}\cdot 01$  mm. Doubtless a *Phoma* or *Phyllosticta*. And *Dothidia orbicularis*, Berk. in Herb. No. 9144, is also the same species.

5199. *D. stipata* (Fr.) Schwein. Herb. Berk. 9253.

Without fruit. Not a *Dothidea*.

5202. *D. cinerascens*, Schwein. Herb. Berk. 9285.

Is a *Phoma*, with spores elliptical, hyaline,  $\cdot 015 \times \cdot 004$  mm., mixed with the mycelium of *Cladoeporium*?

5203. *D. Asclepiadis*, Schwein. Herb. Berk. 9278.

Sterile. Seems to be a small *Sclerotium*.

5204. *D. Impatiētis*, Schwein. Herb. Berk. 9280.

Thin, effused, black spots, an inch or more in length, but wholly sterile.

5205. *D. Silphii*, Schw. Herb. Berk. 9288.

Masses of dark brown mycelium, with a small *Phoma*. Spores elliptical,  $\cdot 012 \times \cdot 002$  mm.

5206. *D. dispersa*, Schwein. Herb. Berk. 9283.

Cuticular spots of brown mycelium, without cells, perithecia, or spores. Somewhat the appearance of a *Leptostroma*.

5207. *D. conferta*, Schwein. Herb. Berk. 9236.

No indication of fruit. Not the habit of a *Phyllachora*.

5209. *D. ornans*, Schwein. Herb. Berk. 9237.

A small *Phoma*, with minute oval spores, about  $\cdot 003 \times \cdot 002$  mm.

5210. *D. hibiscicola*, Schwein. Herb. Berk. 9279.

Membranaceous perithecia, with filiform flexuous stylospores,  $\cdot 025$  mm. long.

5211. *D. Phytolacæ*, Schwein. Herb. Berk. 9209.

Without fruit. Probably a *Phoma*.

5212. *D. inelegans*, Schwein. Herb. Berk. 9232.

Perhaps an *Asteroma*, but without fruit.

5214. *D. crustacea*, Schwein. Herb. Berk. 9236.

Black, effused, fragile crust, but without perithecia or spores.

5216. *D. polygonati*, Schwein. Herb. Berk. 9266.

With the habit of *Phoma*, but without fruit.

5217. *D. nodicola*, Schwein. Herb. Berk. 9230.

Membranaceous perithecia, filled with subspherical hyaline granules.

5218. *D. elliptica*, Schwein. Herb. Berk. 9228.  
Blackened crustaceous spots, but no fruit.
5219. *D. ambrosiae*, Schwein. Herb. Berk. 9227.  
Without fruit. Not a *Phyllachora*.
5220. *D. viticola*, Schwein. Herb. Berk. 9226.  
With the habit of *Phoma*, but without fruit.
5221. *D. Hyssopi*, Schwein. Herb. Berk. 9267.  
Minute brown spots, without perithecia or spores.
5223. *D. frigoris*, Schwein. Herb. Berk. 9238.  
Perithecia membranaceous. *Phoma*, with elliptical spores,  $\cdot 006 \times \cdot 002$  mm.
5224. *D. chalybea*, Schwein. Herb. Berk. 9240.  
Perhaps an *Asteroma*, but without fruit.
5225. *D. denigrans*, Schwein. Herb. Berk. 9241.  
Blackened spots, without fruit.
5226. *D. missouriensis*, Schwein. Herb. Berk. 9224.  
Diseased cells.
5227. *D. pomigena*, Schwein. Herb. Berk. 9186.  
Minute membranaceous perithecia, with profusion of small oval spores, about  $\cdot 003$  mm. long.
5228. *D. fructigena*, Schwein. Herb. Berk. 9187.  
Appears to be rather a compact kind of *Sporidesmium*, no distinct perithecia, no cavity, and no spores. An uncertain production, should be examined in a fresh state.
5231. *D. delicatula*, Schwein. Herb. Berk. 9281.  
Thin patches of radiating mycelium.
5233. *D. nigrescens*, Schwein. Herb. Berk. 9282.  
Some incipient black mould.
5234. *D. canaliculata*, Schwein. Herb. Berk. 9296.  
This is certainly, from the specimen, *Puccinia cellulosa*, Berk.
5235. *D. penicillata*, Schwein. Herb. Berk. 9244.  
With the habit of *Phoma*, but without fruit.
5236. *D. ceps*, Schwein. Herb. Berk. 9234.  
Mostly a creeping brown mycelium, with here and there a small perithecium, perhaps of *Asteroma*, but without fruit.
5237. *D. dioscoreæ*, Schwein. Herb. Berk. 9235.  
*Phoma dioscoreæ*. Spores elliptical, hyaline,  $\cdot 006\text{--}\cdot 007 \times \cdot 0025$  mm.
5238. *D. panici*, Schwein. Herb. Berk. 9287.  
Without fruit.
5239. *D. lineola*, Schwein. Herb. Berk. 9284.  
A small *Phoma*, with very minute spores.
5240. *D. scapincola*, Schwein. Herb. Berk. 9277.  
Possibly a *Phoma*, but sterile.

5244. **D. allicum**, *Schwein.* Herb. Berk. 9229.

Not to be distinguished from *Leptostroma litigiosum*. Desm.

To these may be added the following, which are not inserted in Saccardo's Sylloge:—

**D. Liriodendri**, *Schwein.* 1951. Herb. Berk. 9272.

*Ectostroma Liriodendri*, Fr. No fruit.

**D. petiolaris**, *Schwein.* 1955. Herb. Berk. 9267.

Blackened spots, but no spores.

**D. Annonæ**, *Schwein.* 1954. Herb. Berk. 9268.

Ectostromoid spots, but no fruit.

**D. gramma**, *Schwein.* 1888. Herb. Berk. 9250.

Perithecia immature, no fruit. See Saccardo, 4452.

**D. atra** (Fr.) *Schwein.* 1869. Herb. Berk. 9259.

Linear stylospores, .008 mm. long, produced in cavities or cells.

**D. radicalis**, *Schwein.* 1874. Herb. Berk. 9262.

This is a *Sphæropsis*. Spores oval, hyaline at first, ultimately dark brown, continuous,  $25 \times .016$  mm.

**D. zea**, *Schwein.* No. 1866. Herb. Berk. 9256.

Not distinguishable from *Gibberella Saubinetii*, M.

**D. Schimperii**, *Berk.* Herb. 9188.

From Mount Sinai. Habit of *Dothidea*, but without fruit.

**D. Coriariae**, *B. & C.* Herb. Berk. 9135.

Is without fruit. Not the habit of *Phyllachora*

**D. Robergei**, *Desm.* Herb. Berk. 9157.

Is *Venturia circinans*, Sacc.

**D. dulcamaræ**, *Berk.* in Herb. No. 9167.

Is a *Diplodia*.

**D. glumarum**, *B. & Curt.* in Herb. Berk. 9181.

Is evidently *Gibberella Saubinetii*, M.

**D. hymenicola**, *B. & Br.* Herb. Berk. 9184.

Is *Homostegia lichenum*, Somm. The asci are perfectly distinct and clavate, sporidia biseriata.

**D. vernicosa** (Fr.) *Schwein.* Herb. Berk. 9243.

Habit of *Phoma*, but sterile.

**D. Frazini**, *Fr.* Herb. Berk. 9146.

Is *Septoria frazini*, Lasch.

**D. coryli**, *Schwein.* Herb. Berk. 9113.

Entirely sterile. Perhaps a condition of *Gnomonia*.

**D. diospyri**, *Schwein.* 1907. Herb. Berk. 9248.

Without fruit.

**D. granulata**, *Berk. & Curt.* Herb. Berk. 9124

Is a *Tubercularia*, perhaps *T. granulata*.

**Phoma phlomidis** (Lev.), Cooke.

*Dothidea phlomidis*, Lev. *Demid. Voy.* II. 108, t. 5, f. 2. Herb. Berk. 9197.

Epiphylla. Peritheciis sparsis, atris, prominulis, ostiolis incon-

spicuis. Sporis cylindricis, simplicibus, pellucidis, obtusis,  $\cdot 02 \times \cdot 004$  mm.

In foliis *Phlomidis pungentis*, Sympheropol.

**Phyllosticta Paliuri** (Lev.), Cooke.

*Dothidea Paliuri*, Lev. *Demid. Voy.* II., 107, t. 5, f. 6. Herb. Berk. 9145.

Hypophylla, atra, maculæformis. Peritheciis minutissimis, confertis, albo faretis, stromate tenui impositis. Sporidiis ovato-linearibus, pellucidis, curvatis, simplicibus, obtusis,  $\cdot 006 \times \cdot 002$  mm.

In foliis *Paliuri aculeati*. Yalta.

**Septoria pistaciæ** (Lev.), Cooke.

*Dothidea pistaciæ*, Lev. *Demid. Voy.* II., 108, t. v. f. 2. Herb. Berk. 9499.

Hypophylla, maculæformis, atra, irregularis. Peritheciis innatis, confertis, minutissimis, ostiolis inconspicuis. Sporidiis filiformibus, curvatis, simplicibus, pellucidis,  $\cdot 05$  mm. long.

In foliis *Pistaciæ*. Nikita.

## NEW BRITISH FUNGI.

(Continued from Vol. XII., p. 100.)

By M. C. COOKE.

**Agaricus (Flammula) gymnopodius.** Bull. t. 601, f. 1.

Dark ferruginous. Pileus fleshy, campanulate then convex, squamulose; stem solid, becoming smooth, equal; gills very decurrent, arcuate, crowded.—Fr. *Hym. Eur.* p. 244. Cooke *Illus.* t. 431.

On pine sawdust. Munstead (*T. Howse*).

Stem 2 in., or more, long. Pileus 2-3 in. broad.

**Agaricus (Flammula) alius.** Fr. *Icon.* t. 117, f. 1.

Pileus fleshy, thin, convex then plane, smooth, moist after rain, glivous; stem fistulose, long, smooth, pallid, reddish within; gills adnate, rather crowded, white then pallid.—Cooke *Illus.* t. 432.

On the ground in woods. Haywood Forest.

Stem 3-6 in. long,  $\frac{1}{2}$  in. thick, equal or attenuated below, pallid, becoming reddish at the base, and within. Pileus 2-3 in. broad, even, smooth, with rather viscid cuticle, pale orange-red with the disc rufous. The figure in illustrations has too yellow a tone, and is printed rather too dark in the pileus, which it was impossible to alter without cancelling the plate.

**Agaricus (Psathyra) helobius.** Kalkb. *Icon.* t. 17, f. 4.

Pileus submembranaceous, conical campanulate, soon plane, somewhat umbonate, with concentric elevated ridges at the disc, otherwise radiately rugose, fuliginous, margin striate brown; stem fistulose, slender, umber becoming reddish, clad with

fugacious whitish flocci; gills adnate, rounded behind, rather crowded, fuliginous.—*Fr. Hym. Eur.* 308.

Moist places in pine woods. Coed Coch (*Rev. M. J. Berkeley*).

***Boletus tenuipes.*** *Cooke.*

The form described as *Boletus granulatus*, var. *tenuipes*, in "Grevillea," vol. xii., p. 43, has occurred again this year several times in Epping Forest. The bright, clear yellow pores are very distinctive, conjoined with the other characters already indicated, and, in fact, it cannot be united, with any reason, to *B. granulatus* or *B. bovinus*, hence we have applied to it the above specific name.

On the ground in woods. Epping Forest, several localities. Oct., 1884.

***Boletus candicans.*** *Fr. Hym. Eur.* 507.

Pileus leathery, smooth and polished when dry, dirty white with a faint greenish tinge of colour, margin irregular, somewhat crenate; stem lemon white, reticulated, solid; flesh changing rapidly from white to indigo-blue when exposed to the light; tubes lemon, with their orifices uneven and irregular in size. Spores  $0.12 \times 0.05$ . *Boletus pachypus*, Smith Illus. t. 17. *Boletus elephantinus*, with. Arr., ed. iii., vol. 4, p. 317.

In open places, amongst grass.

Emulating *B. pachypus* in size, and long known in this country, but included with that species. Fries considers it sufficiently distinct to merit the specific name which he assigned to it, although Withering's has priority, if it is the same species, of which there is little doubt.

***Boletus duriusculus.*** *Kalch. Fr. Hym. Eur.* 515.

Pileus globose then hemispherical, soft, smooth, viscid when moist, whitish tawny, then dirty chestnut-colour (often olivaceous), stem attenuated at the base, ventricose, whitish, normally densely punctate with delicate umber squamules; tubes free, elongated, thin, livid, becoming tawny, pores white at length of the same colour.—*Kalchb. & Schulz. Icon.*

In woods. Epping Forest.

About the size of *B. scaber*, with which it has probably been confounded. Pileus when dry cracking into small arcolæ in a tessellated manner. Flesh firm, white, on contact with the air becoming coppery-red, passing into greyish-violet, with the margin and base remaining white. Stem very firm, "edible, delicious."

***Hydnam diversidens.*** *Fries. Hym. Eur.* 609.

Pileus fleshy, inclining to stipitate, greatly deformed, white, densely clad on the upper surface with variable erect incised teeth, margin entire, furnished with clavate teeth, and beneath invested with regular entire subulate spines.—*Fr. Sver. Svam. t.* 71, f. 2.

On trunks. Near Fairmead in Epping Forest. Sept.-Oct., 1884 (H. T. Wharton and J. C. Webb).

Forming a cæspitose mass about six inches in diameter. The

pilei confluent at the base. Odour and taste similar to *H. repandum*. Edible.

**Entorrhiza cypericola** (Magn). Weber. Bot. Zeit., Vol. 41, p. 369, t. 4.

Swellings generally white, oval, nearly smooth, from the size of a pin's head to that of a small pea. The outer layers after a time tend to become brown in colour, rendering the whole tumour brown. In the cells of the cortex lie the spores, connected by mycelium filaments. These filaments are wavy or spirally twisted, or collected in coils. The spores are produced at the tips of wavy or spiral branches, thinner than the ordinary branches from which they arise. They become round, and of an average  $\cdot 02$  by  $\cdot 017$  mm. The outer layer of the spore becomes covered with rather large warts, and is usually of a deep yellow or reddish-yellow colour.—Prof. Trail in *Scottish Naturalist*. Oct., 1884.

On roots of *Juncus bufonius*.

**Melanotenum endogenum**. Unger. Ewanth.

The attacked plants become stunted. Stems dark, usually dull purplish or blackish throughout, or at the nodes. The cortex is much crowded with the spores of the fungus, usually collected in groups. The spores are more or less angular from mutual pressure, brown, varying considerably in shade or depth of colour.—Prof. Trail in *Scottish Naturalist*. Oct., 1884.

On stems of *Galium mollugo*.

**Hypomyces ater**. Fr. *Grevillea* XII., p. 80.

Irregularly effused, usually covering the entire fungus on which it is parasitic, black. Perithecia semi-immersed, with a conical ostiolum of the same colour. Asci cylindrical, sporidia lanceolate, acute at each extremity, usually beaked at one end, continuous, hyaline, sometimes the rostrum seems to be divided from the body of the spore by an incipient septum ( $\cdot 03\text{--}035 \times \cdot 005\text{--}006$  mm.).

On small undetermined *Agarics*. Carlisle (*Dr. Carlyle*).

A very distinct species, agreeing perfectly with the specimens from Fries.

## BRITISH HYMENOMYCETES.

We must again direct the attention of our readers to the paragraph on page 97, in which it is announced that the Rev. John Stevenson is prepared to issue a "Flora of British Fungi," containing full descriptions of all the British Hymenomycetes. This work is proposed to occupy 2 vols., at half-a-guinea each, and we are assured will be sent to press as soon as sufficient subscribers are obtained to warrant the venture. It is to be hoped that all who are interested in British Botany will favour Mr. Stevenson with their support, and that we shall soon hear that the list has attained a sufficient length for him to send the first volume to the press. We believe that we are correct in stating that it is intended to embody all the valuable information contained in Fries's "Monographia," so far as relates to British species. Communications to be sent to the Rev. John Stevenson, Glamis, Forfar, N.B.



## NEW AND RARE BRITISH FUNGI.

BY W. PHILLIPS, F.L.S., AND CHARLES B. PLOWRIGHT.

(Continued from Vol. x., p. 74.)

227. *Agaricus (Lepiota) felinus*, Pers. Syn., p. 201. Fr. Hym., p. 32.

Pileus ovato-campanulate, then expanded, umbonate, submembranaceous, with a very dull, almost black centre, squamose, each minute scale being tipped with a black speck; margin striate, crenulate, thin, tender, and fragile; stem hollow, enlarged below; ring large, fragile, evanescent; gills white, free, subdistant, serratulate. Spores oval or oval-elliptical,  $10 \times 5$  mill.

Pileus  $1\frac{1}{2}$  to  $1\frac{3}{4}$  in. across. Stem  $1\frac{3}{4}$  to 2 in. high, 1-2 lines thick.

In fir woods. Amongst moss. Middleton, 1876. North Wootton, 1880.

This is a very pretty fragile species. The white pileus, with an almost black umbo, is very striking; the lower part of the stem has often a very delicate reddish tinge.

228. *Agaricus (Clitocybe) vermicularis*, Fr. Hymen., p. 98.

Pileus slightly fleshy, umbilicate then reflexed, infundibuliform, repand, even, smooth, moist, becoming pale; stem hollow, soon compressed, smooth, shining, and, as well as the decurrent very crowded thin gills, white.

Somewhat fragile, pileus of a beautiful red or flesh-colour, then tan (almost hygrophanous). Most frequently undulato-lobed. —Fries.

Forres, N.B. Rev. Dr. Keith.

\* *Agaricus (Omphalia) Postli*, Fr. Hymen., p. 157.

King's Lynn. C.B.P. July, 1883.

229. *Agaricus (Pluteus) salicinus*, Pers. Fr. Hymen., p. 659.

Pileus rather fleshy, convexo-plane, subumbonate, disc darker, floccoso-rugose; stem stuffed, fibrillose, bluish-white; gills free, rosy.

In the interior of a hollow pollard willow. South Wootton. Sept. 11, 1882.

Pileus about  $1\frac{1}{2}$  to 2 in. wide; with a tinge of green.

\* *Agaricus (Pholiota) ægerita*, Fr. Hymen., p. 219.

On elm tree. King's Lynn.

230. *Agaricus (Hypoholoma) hypoxanthus*, N. sp.

Cespitose. Pileus umbonate, moist, viscid, dirty white, umbo darker, brownish, squamulose with minute black fibrillæ, which are evanescent; gills purple brown, crowded, narrow, edge white, adnate, seceding, sometimes forked; pileus subcarnose, except the centre, which is a thick fleshy umbo; stem curved, hollow, incrassated below, whitish, smooth above, floccoso-squamose below. Base with a distinct yellow tinge; mycelium orange-yellow.

This agaric has been regarded as *A. storea*, but incorrectly so. It is always cœspitose, and has hitherto occurred either on rotten beech wood or under beech trees.

Forres, 1882. High Beech. Epping Forest.

Pileus about 2 in. across. Stem 2 to 4 in. high, by 3 lines thick.

**231. *Russula Du Portii*, Phil., n. s.**

Pileus compact, fleshy, firm, convexo-plane, depressed, smooth, dry, centre rufous or flesh-red; margin bluish, even, obtuse; stem spongy-stuffed, minutely striate, glabrous, white; gills rounded behind, broad, distant, white.

In a wood. Mattishall, Norfolk. The Rev. Canon DuPort.

Pileus  $1\frac{1}{2}$  to  $2\frac{1}{2}$  in. broad; stem 1 in. or more high, and 5 to 8 lines broad.

The flesh turns reddish brown when cut, and the odour is that of the common crab.

**232. *Cortinarius (Phlegmacium) porphyropus*, Fr. Hymen., p. 351.**  
*Grevillea* II., p. 116.

Terrington St. Clement's. In a mossy meadow under trees. Oct., 1883.

**233. *Cortinarius (Hydrocybe) scandens*, Fr. Hymen., p. 396. variety.**

Pileus submembranaceous, conical, then expanded, at first tawny-ferruginous, when moist honey-coloured, when dry alutaceous, umbo-fleshy, margin striate; stem fistulose, flexuous, smooth, apex thickened, base attenuated white; gills adnate, thin, rather distant, tawny, cinnamon, edge of the same colour.

In fir woods. North Wootton Heath. Oct. and Nov., 1883.

This small species occurred in great abundance in clusters on the ground, amongst fir leaves.

**234. *Cortinarius (Hydrocybe) fasciatus*, Fries Hymen., p. 399.**  
*Grevillea* VIII., p. 78.

Reffley Wood. Oct. and Nov., 1883.

**235. *Hydnum diversidens*, Fr. Hymen., p. 609. Sv. Atl. Svamp., t. 71, f. 2. *Grevillea* XIII., p. 46.**

On beech. Near Guildford. Mr. T. Howse. Oct., 1883. Found also in Epping Forest on hornbeam by Dr. Wharton, Oct., 1884.

**236. *Cyphella Pimii*, Phil.**

Fasciculate, cyathiform, erect or pendant, membranaceous, pubescent, white or very pale yellow; stem rather slender, crooked, enlarged upwards; margin of cup somewhat incised; basidia cylindraceo-clavate; spores subpyriform, colourless ( $0.07 \cdot 01 \times 0.04$  mm.).

On dead herbaceous stems in water. Dublin. Mr. Greenwood Pim.

About 2 lines high and cup 1 line wide. The basidia have sometimes only two spicules, generally four.

**237. *Cyphella brunnea*, Phil.**

Scattered or crowded, sessile, cupulate, dirty-brown, clothed near the margin with a grey pruina; margin incurved, lacerated, mouth

oblique; hymenium smooth, discoloured-brown; flesh paler, subgelatinous; basidia clavate, two to four spicules; spores colourless, globose (.005-.006 mm.).

On bark and wood of old elder trees. Shrewsbury.

Cups .5 mm. across, .8 mm. high.

238. *Clavaria striata*, Pers. *Fries Hymen.*, p. 675.

Cæspitose, fistulose, subfuliginous; clubs very long, flexuous, somewhat twisted, sparsely striate. Pers.  *Ic. et Descrip.*, t. 3, f. 5.

On the ground. General Cemetery, Shrewsbury.

The clubs were decidedly striate.

239. *Tremella (Coryne) follicola*, Fekl. *Symb. Myc.*, p. 402. Sacc. *Fungi Ital.*, No. 1024.

Scattered, crowded, subsessile, granular, globose, the upper part whitish, gelatinous, the lower brown, hard and dry; when dry cupulate. Conidia on the apices of branched sterigmata, fusiform curved, simple, hyaline  $6 \times 2$  mk.

On the lower surfaces of the leaves of *Rubus fruticosus*, with *Phragmidium*.

Castle Rising. March, 1882.

240. *Nidularia confuens*, Fries et Nordh.

Rootless, peridium subglobose, smooth, villous; sporangia orbicular, wrinkled, brown (*Fries et Nordh.*).

*Nidularia confuens*, Fries et Nordh. *Symb. Gast.*, p. 3; Tulasne *Ann. des. Sc. Nat.*, 1844, p. 96; *Nidularia farcta (confuens)* Fries. *Sys. Myc.* ii., p. 301.

On dead wood (pine). Forres. The Rev. Dr. Keith.

About twice the size of a pea, adhering by a broad base to the wood, crowded and partly confluent, very irregular, villous, nearly even, persistent, pale fawn-colour; splitting at the summit into a broadish lacerated opening; internally glabrous, and filled with the orbicular lentiform sporangia, which are brown, wrinkled, and shining, and are immersed in a gelatinous matter which is very adhesive. The hymenium lines a very narrow opening in the sporangium; the basidia are variable in shape, but mostly clavate, bearing one, two, or three spicules; the spores are subglobose (.005 mm.). A few cystidia occur at intervals flask-shaped.

The spores of this species distinguish it at once from *N. pisi-formis*.

241. *Septoria stellaris*, Rob. & Desm. *Nat. xiv.*, p. 22. Sacc. *Mic. I.*, p. 182.

Spermatia rod-shaped, curved,  $50-60 \times 1$  mk., indistinctly septate, hyaline.

On *Stellaria*. Forres. Rev. Dr. Keith, 1882.

242. *Ascochyta aceris*, Fekl. *Sym.* p. 387. *Cheilaria aceris*, Lib.

*Didymosporium aceris*, Mont. *Rabh. Essic.*, 1756.

Spots brown, irregularly rounded. Perithecia minute, black, discrete. Spores oblong, very pale brownish, uniseptate,  $8$  to  $10 \times 3-4$  mk.

On living leaves of *Acer campestre*. Rev. J. E. Vize. Oct., 1884.

243. *Ramularia hellebori*, Fekl. *Symb. Mycol.*, p. 361., Sacc. *Myc.* II. p. 381.

Spots on the leaves rounded, amphigenous, whitish, with black margins. Hyphæ fasciculate, nodulose, white, simple,  $20 \times 3$  mk. Conidia fusiform,  $24-30 \times 4-5$  mk.; simple or centrally uniseptate, hyaline.

On *Helleborus*. 1884. Mr. Soppett.

244. *Ramularia rosea* (Fekl.) Sacc. *Mich.* II., p. 550. *Fungi Ital. t.* 1001. *Fusidium Roseum*, Fekl. *Sym.* p. 370.

Spots subochraceous, minute, hyphæ fasciculate, simple or branched, subdentate, hyaline,  $30-35 \times 2-2.5$ . Conidia fusiform,  $15-20 \times 2-2.5$ . Simple or pseudoseptate in the middle, hyaline.

On the under surface of living leaves of *Salix viminalis*. North Wootton, 1884.

245. *Ramularia pratensis*, Sacc. *Mich.* II., 550. *Fungi Ital. t.* 998.

Spots mostly on the leaves, rounded or oblong pallid, ochraceous, with red margins. Hyphæ lax, terete,  $30-40 \times 4$ , obtuse and dentate at their apices. Simple or uniseptate, hyaline. Conidia cylindrical or subfusiform, moniliform, often uniseptate,  $16-25 \times 3-3.5$  mk., hyaline.

On *Rumex acetosa*. North Wootton Heath, 1882.

246. *Sporotrichum geochroum*, Desm. Sacc. *Fungi Ital. t.* 743. *Mich.* vol. II., p. 552.

Effused, velvety, ochraceous yellow; fertile hyphæ erect, rough, subcontinuous, slightly branched. Conidia globose,  $3-4 \times 3-3.5$ . Contents granular, fulvous.

On rotten wood. Mr. G. B. Brown, Ealing.

247. *Ovularia asperifolia*, Sacc. *Mycol. Ven.* No. 591. *Fungi Ven. Ser.* v., p. 186.

King's Lynn. On *Symphytum officinale*. 24 May, 1882.

248. *Amblyosporium umbellatum*, Harz. *Hyphom.*, p. 48, t. II., f. 7. *Briarea aurea* Fekl. *Symb.* p. 359. Sacc. *Mycol. Ven. Spec.* p. 184, t. XVII., f. 1-4. *Myc.* I., p. 271. *Fungi Ital. t.* 703. *Amblyosporium botrytis*, Fres. *Beitrag.* p. 99, t. xv., f. 17-21.

Spores ellipsoid, longitudinally striate, rather large, at first white then beautiful saffron yellow, not truly contiguous but connected together in a moniliform manner by apiculi or sterigmata. Hyphæ rather thick,  $20-25$  mk. in diameter. Conidia  $15-16 \times 10-12$  mk.

On decaying *Agarics*. King's Lynn, 1883.

249. *Myxotrichum cancellatum*, Phil. n.s.

Forming little patches; spherical, cinereous; flocci long, subulate, black, simple, except at the base, where the anastomosing branches form a hollow network surrounding the spore-mass; spores very minute, elliptical, nearly colourless ( $.003$  mm. long.)

On dead stems of *Bartsia odontites*, under a bell-glass. Shrewsbury. Dec., 1882.

Spheres, exclusive of flocci, .2 mm. diameter. This species differs from other British species in the flocci not radiating from the centre of the spore-mass, but arising from a beautiful latticed framework surrounding the spore-mass like a spherical cage. It is near *M. ochracea*, B. & B., but it has no deflexed branches on the flocci, and the spores (conidia) are elliptical.

250. *Tubercularia vinosa*, Sacc. *Mycol. Venet.* No. 1089. *Michel.* p. 262. *Fungi Ital.* No. 963.

Very similar to *T. persicinæ*, Ditmar, but differing in the cluster being larger and vinous. Conidia subglobose or ovoid, 11-12 × 10 (not 7 to 8 mk. in diameter), basidia shorter, thicker, and simple.

On *Rastelia lacerata*. Downham, July, 1884. On *Æcidium asperifolii*. Castle Rising, Oct., 1884.

251. *Urocystis Fischeri*, Körnicke. *Hedwigia*, 1877, p. 34.

*Uredo Agropyri*, Preuss. *Urocystis Agropyri*, F. v. W.

Spore-balls with 1 or 2, more rarely 3, central spores, 20 to 45 mk. in diameter. Central spores intersecting, somewhat larger than those of *Ur. occulta*, generally 17-19 mk. Accessory spores firmly attached in large numbers, quite encircling the central spores, almost as darkly coloured.

On the leaves of *Carex glauca*. Mr. Soppett, Nov., 1884.

252. *Ustilago hypogæa*, Tul. *Fungi Hypogæi*, 1862, p. 196.

Spores rounded or rounded-polygonal, 20 to 24 mk. long, by 14-20 wide; dark brown, scarcely transparent; contents very oleaginous.

Forming a compact mass around the root-stock of *Linaria spuria*, intersected with white fibres.

Freshwater, Isle of Wight. Dr. John Lowe, 1869.

253. *Entyloma bitolor*, Zopf.

Spores spherical, elliptical or polygonal, of very various sizes, (about 12-17 mk. in diameter, to 23 mk. long). Epispore gelatinous, of variable thickness, at first colourless, afterwards brown. Conidia on simple or branched conidiophores, which emerge through the stomata on the under surface of the leaves in clusters. Cylindrical, curved, smaller at the base, rounded above, simple or septate, colourless, 10 to 22 long by 3 mk. wide.

On the leaves of *Papaver rhæas*. North Wootton. July, 1882.

254. *Uromyces poa*, Rbh.

I. *Æcidio-pores*, *Æcidium Ranunculi repentis*, and *ficariæ*.

II. *Uredospores*. Sori rounded, elliptical, lanceolate or linear, long, covered by the epidermis, which at length splits longitudinally. Spores roundish, elliptical or ovate, finely echinulate, orange-yellow, 16 to 25 mk. in diameter, without paraphyses.

III. *Teleutospores*. Sori small, punctiform, or rather elongate, covered by the epidermis. Spores rather long, thin, pedicels very varying and irregularly formed, mostly elliptical or ovate, brown

with a smooth equally thick episore, 17 to 24 mk. in diameter, sometimes as much as 40 mk. long, by 13 to 16 mk. wide.

I. On *Ranunculus repens* and *R. ficaria*.

II. and III. On *Poa trivialis* and *pratensis*.

Extremely abundant in all parts of Great Britain.

255. *Puccinia hydrocotyles*, (Pers.) Grevillea IX., 14. *Cosma hydrocotyles*, Link. sp. plant II., p. 22.

II. *Uredospores*. Sori small, scattered, principally upon the upper surface of the leaves; sometimes in circular groups, clustered round a larger central sorus; rarely confluent, rarely cauline. Spores irregularly oval, subglobose, or obovate, 20 to 30 mk., finely echinulate, pale brown.

III. *Teleutospores*. Mixed with the uredospores, oblong or ovate, slightly constricted, on moderately long, hyaline, firmly-attached pedicels; brown, upper cell generally larger and rounded above, 40 to 45 mk. long, by 20 to 25 mk. wide.

Epping Forest. Oct., 1882.

256. *Puccinia, perplexans*, Plow.

I. *Æcidiospores*=*Æcidium Ranunculi acridis*.

II. *Uredospores*. Sori elliptical elongate, or linear on both surfaces of the leaves, but especially on the upper, sometimes confluent, soon exposed by the rupture of the cuticle. Spores globose oval or subovate, golden yellow, finely echinulate, 30 to 35 mk. long by 20 to 25 mk., wall with or without capitate paraphyses.

III. *Teleutospores*. Sori small, sometimes punctiform, but generally elongate linear or elongate oval. Covered by the cuticle, black, often clustered, sometimes confluent. Spores very irregular in form and size. Pedicels very short, oblong, subfusiform or clavate; upper cell rounded, truncate or attenuated, often obliquely; central constriction little or none, lower cell generally wedge-shaped, brown, smooth, episore often apparently granular, 40 to 60 mk. long by 10 to 12 mk. wide

I. On *Ranunculus acris*.

II. and III. On *Alopecurus pratensis*. *Avena elatior* and *Poa* sp?

Near King's Lynn. May and June, 1883.

257. *Puccinia Magnusiana*, Krön.

I. *Æcidiospores*=*Æcidium Ranunculi repentis* and *bulbosi*.

II. *Uredospores*. Generally on small elongated pale yellowish spots, small elliptical lanceolate or linear, yellow, spores roundish, obovate or oblong, finely echinulate, orange yellow,  $21-35 \times 12 \times 201$  mk., mixed with paraphyses.

III. *Treleutospores*. Sori on small yellow, often confluent, spots, very numerous, scattered small, rather pulvinate, elliptical or linear on the stems often forming very long blackish lines. Spores on rather long firmly attached pedicels, oblong or clavate,

attenuated below towards the pedicels; apex much thickened, rounded, truncate, or more or less conical. Central constriction slight or absent, chestnut brown,  $30-35 \times 15-26$  mk.

I. On *Ranunculus repens* and *bulbosus*.

II. and III. On *Phragmites communis*.

This *Puccinia* has hitherto been regarded as a variety of *P. graminis* occurring upon reeds. The presence of paraphyses with the uredospores does not accord with these species; germinating teleutospores of *P. magnusiana* produced no *Æcidium* upon *Berberis vulgaris* nor upon any of the Rumices.

**258. *Puccinia poarum*, Nielson.**

I. *Æcidiospores*=*Æcidium tussilaginis*.

II. *Uredospores*. Sori rounded, elliptical, or linear, scattered or irregularly grouped, orange yellow or foxey-red. Spores spherical or elliptical, with a verrucose uneven epispore, orange yellow, 20 to 30 mk. in diameter.

III. Sori very variable in form and size scattered or in circular clusters; covered by the epidermis. Spores on very short, generally brown, pedicels, very variously formed; apex much thickened, often attenuated, dark brown, as much as 50 mk. long by 24 mk. wide.

I. On *Tussilago farfara*.

II. and III. On *Poa annua*, *pratensis* and *trivialis*. Exceedingly common in all parts of Great Britain.

The teleutospore sori are often in circles or parts of circles.

**259. *Puccinia Schrötriana*, Plow and Magnus.**

I. *Æcidiospores*=*Æcidium Jacobææ*, Grev. *Æcidia* in circular clusters, mostly upon the under side of the radical leaves; edges reflexed, torn, whitish. Spores rounded, polygonal, yellow, finely echinulate, 15 to 20 mk. in diameter. *Spermogonia* on yellow spots, corresponding to the *æcidial* groups, but on the upper surface of the leaves.

II. *Uredospores*. On yellow discoloured spots, sori elongate or rounded, generally hypophyllous, some naked, spores subglobose or ovate or oval, yellowish brown, rough, 25 to 30 mk. by 14 to 20 mk.

III. *Teleutospores*. Sori erumpent, oblong or elongate; large, prominent, almost black; hypophyllous, surrounded by the ruptured epidermis. Spores on long, firmly attached pedicels, slightly constricted at the centre; upper cell subglobose, oval, or attenuated above; apex much thickened, rounded, or pointed; lower cell wedge-shaped, often paler than the upper; brown, smooth, 60 to 80 by 15 to 20 mk.

I. On *Senecio Jacobææ*. II. and III. On *Carex arenaria*.

North Wootton Heath. Skegness, 1883.

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# Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY  
AND ITS LITERATURE.

## NEW BRITISH FUNGI.

By M. C. COOKE.

(Continued. from p. 47.)

**Agaricus (Tricholoma) variegatus**, Scop. Carn. 494.

Pileus fleshy, soon flattened, dry, and, as well as the tough stuffed stem, *squamulose with reddish flocci*; gills emarginate, crowded, pallid yellowish or whitish, edge equal, quite entire, of the same colour. *Fr. Hym. Eur.* 53.

On rotten wood. Epping. (*J. English.*)

Smaller and more slender than *A. rutilans*, from which it can scarcely be separated as a distinct species. In the specimens collected the stem was pallid yellowish and scarcely floccose, the gills whitish. Easily mistaken for an abnormal form of *Ag. rutilans*, and it may be nothing more.

**Agaricus (Collybia) velutipes**, Fries; variety, *rubescens*, Cooke.

Pileus *viscid*, about an inch, bright ferruginous brown, obscurely striate, stem as in the type, velvety dark brown, internally becoming blackish below, white above; gills *becoming spotted with brown*.

Amongst fir leaves. Largo, N.B. (*W. G. Smith.*)

This peculiar variety will be figured in the supplement to the "Illustrations." It may be considered by some to claim rank as a distinct species, on account of the viscid pileus and spotted gills, but being found so late as November (1872), the time at which *Ag. velutipes* is most flourishing, strengthens the impression that it is only a variety of that species.

**Agaricus (Collybia) leucomyosotis**, Cooke & Smith.

Pileus convex then expanded, sometimes obtusely umbonate pale mouse-coloured, disc darker, paler at the margin, whole plant becoming pallid, almost white when dry, *strong scented*, rather fragrant, margin faintly striate, stem hollow, very brittle, slightly pruinose above, pallid, white at the base, and obtuse. Gills thick, moderately distant, adnate, sinuate behind, white. Spores elliptic ( $0.006 \times 0.004$  mm.). *Cooke Illust. Supp. ined.*

On Sphagnum, in bogs, Wimbledon Common and other places, May, 1868. (*W. G. Smith.*)

Pileus about an inch. Stem reaching to 4 or 5 inches, about 2 lines thick. Habit very much resembling the figure in Fries' *Icones* of *Ag. (Naucoria) myosotis*, hence the name.

**Agaricus (Leptonia) formosus**, *Fr. Hym. Eur.* 205.

Pileus submembranaceous, convexo-plane, rather umbilicate, faintly striate, waxy-yellow, squamulose with adpressed scattered brownish fibrils, stem stuffed, striate, smooth, shining, yellow; gills adnate, rather distant, pallid yellow.

var. *suavis*, *Lasch.*

Stem becoming blue. *Cooke, Illustr.*, t. 488.

Amongst *Equisetum*. Scarboro'. (*G. Massee.*)

**Agaricus (Pholiota) luxurians**, *Fr. Hym. Eur.* *Ag. (Pholiota) aegerita*. *Phillips in Cooke Illus.* t. 365.

Pileus fleshy, convex, gibbons, then expanded, unequal, silky then squamulose; stem stuffed, rigid, somewhat squamulose, white becoming rufescent, ring apical, torn, fugacious; gills adnexed, then decurrent, crowded, greyish, flesh colour, becoming brownish. *Batt.* t. 23, f. B.

On oak trunks.

Cæspitose. Pileus at first white, then yellowish; at length reddish tawny, flesh white.

**Agaricus (Pholiota) cruentatus**, *Cke. & Smith.*

Pileus fleshy, convex then expanded, obtuse, dry, yellow, breaking up into darker adpressed scales; margin incurved; stem of the same colour as the pileus, curved, solid, attenuated at the base and rooting, dark red brown and sparsely squamulose below, ring fibrillose; flesh pale yellow, at length changing to cinnabar colour. Gills rather distant, emarginate, finally separating from the stem, yellow then clay colour. *Cooke Illus.* t. 502.

On oak stump, and also on burnt ground. Aug., 1872. (*W. G. Smith.*)

Pileus about 2 inches diam., yellow then turning red. Stem 2 inches long,  $\frac{1}{4}$  in. thick above. Gills 2 lines or more. Allied to *Ag. tuberculosus* and *Ag. curvipes*. Taste insipid.

**Agaricus (Inocybe) incarnatus**, *Bresadola, Fung. Trid.* t. 53.

Pileus fleshy, convex campanulate, then expanded and gibbous, or broadly umbonate, fibrillose then squamulose, margin fimbriate, yellowish then rufescent or tinged with flesh colour (6-8 c.m. broad). Stem solid, attenuated and somewhat rooting at the base, rather fibrillose, rosy flesh colour, white and mealy at the apex. *Flesh* of the pileus white, becoming deep red when broken, odour strong and persistent of pears, taste mild. Gills crowded, sinuate, adnate behind, broad, rather fringed at the edge, whitish, then greyish cinnamon; at length spotted with red, or wholly rufescent. Spores subovate ( $0.009-0.011 \times 0.006-0.007$  mm.). *Cooke Illus.* t. 473.

In woods near Bristol and at Dinedor. Oct., 1884.

Stem more robust than in *A. pyriodorus*, which this species resembles in habit and odour.

**Agaricus (Flammula) clitopilus, Cke. & Smith.**

Pileus rather fleshy, convex, disc depressed and umbilicate, smooth, dry, purplish brown (madder brown), stem ventricose, erect, hollow, fuliginous, with a few scattered fibrils towards the base, and brown within, gills scarcely crowded, ventricose, slightly adnexed, pallid. *Cooke Illus. t. 500.*

Amongst firs. Stonehouse, Gloucester. Nov., 1867.

Pileus 2 inches. Stem  $2\frac{1}{2}$ –3 inches,  $\frac{1}{2}$  in. thick in the middle. Allied to *Ag. Weinmanni*, Fries, of which it may possibly be a variety, but differing in the pileus not being virgate, in the ventricose hollow stem, and in the gills not being decurrent.

**Agaricus (Naucoria) triscopus, Fries. Hym. Eur. 259.**

Pileus rather fleshy, conical, then hemispherical, obtuse, then convex and umbonate, even, smooth, bay-brown, ochraceous when dry, stem minutely fistulose, filiform, smooth, ferruginous, umber at the base; gills adnate, thin, rather crowded, dark ferruginous. *Cooke Illus. t. 458, b.*

On old wood in a cellar. Kilburn. (*H. T. Wharton.*)

Pileus about half-an-inch broad, stem an inch long.

**Agaricus (Naucoria) arvalis, Fries. Hym. Eur. 261.**

Pileus rather fleshy, tough, convex then plane, growing pale when dry. Stem fistulose (stuffed) thin pulverulent, becoming yellowish, with a long filiform root; gills adnexed, rather distant, tawny then ferruginous. *Cooke Illus. t. 479, variety.*

On the ground.

The plant figured is not the typical form. Pileus  $\frac{3}{4}$  to  $1\frac{1}{2}$  inches. Stem  $1\frac{1}{2}$  to  $2\frac{1}{2}$  in. With a distinct bulb between the ascending and descending portion of the stem. It is probably a distinct variety.

**Agaricus (Naucoria) glandiformis, Cooke.**

Pileus at first obtusely campanulate, becoming somewhat hemispherical, or filbert-shaped, nut-brown, smooth, even, stem erect, elongated, equal, stuffed then hollow, pallid, sometimes twisted. Gills very broad, rounded behind, adnate, umber. Spores broadly almond-shaped ( $\cdot 01$ – $\cdot 012 \times \cdot 006$ – $\cdot 008$  mm.). *Agaricus nuceus*, Smith, in Herb. Mus. Brit. *Cooke Illus. t. 490, b.*

On the ground. Teignmouth, Devon. Oct., 1867.

Pileus nearly an inch broad and high, nut-brown colour, disc darker. Stem 3–4 inches long, 2 lines thick, pallid.

**Agaricus (Naucoria) myosotis, Fr. Hym. Eur., 261.**

Pileus rather fleshy, convex, expanded, rather umbonate, covered with a viscid pellicle, becoming discoloured; stem hollow, slender, pallid, clad with squamose fibrils, which form a cortinate veil; gills adnate, decurrent, rather distant, at length ferruginous brown, edge serrate, white.—*Fr. Icon. t. 125, f. 1; Cooke Illus. ined.*

In moist places. Scarborough. (*G. Massee.*)

Pileus of a peculiar colour, from olivaceous or greenish-brown to yellowish.

The specimens which will be figured are of rather larger size than usual. The following notes are given by Mr. Massee:—"Pileus

hygrophanous, viscid when moist, minutely rugulose, dark honey-yellow, disc darker, silky veil remaining in tufts at the margin; gills rather distant, ventricose with a decurrent tooth, margin minutely serrulate, paler, at first pale yellow with a pink tinge, then ferruginous. Stem long, hollow, striate, mealy at the apex, whitish, then rufous, with silky fibrillose scales and evanescent fibrillose ring." Pileus 2 inches, stem 6 inches. These features accord admirably with the lengthened description in Fries "*Monographia*."

**Agaricus (Naucoria) latissimus**, Cooke. *Ag. pediades*, Smith in *Herb. Mus. Brit.*

Pileus subglobose, then hemispherical, with a fleshy disc, margin at first incurved; stem attenuated downwards, *rooting*, hollow, smooth, dark-brown below, pallid above, gills *very broad*, rounded behind, slightly adnate, tawny-umber.—*Cooke Illus. t. 482.*

In churchyard. Ely.

Pileus  $\frac{1}{2}$  to  $1\frac{1}{2}$  inches broad. Stem  $1\frac{1}{2}$  to 2 in. long, 2-4 lines thick at the apex.

**Agaricus (Naucoria) strisipes**, Cooke.

*Cæspitose*, or gregarious. Pileus campanulate, obtuse, then expanded, ochraceous, smooth, even. Stem erect or flexuous, equal, hollow, white, *longitudinally striate*, gills rather distant, slightly adnate behind, tawny ferruginous.—*Cooke Illus. t. 478.*

Amongst grass on lawn. Kew Gardens.

Pileus  $1-1\frac{1}{2}$  inches. Stem 2 to 3 inches long, 2 lines thick.

**Agaricus (Galera) mniophilus**, Lasch. in Fries *Hym. Eur.* 270.

Pileus membranaceous, campanulate, somewhat papillate, striate, *tawny yellow*, stem equal, *flexile*, yellowish, *mealy at the apex*, floccose at the base, gills obtusely adnate, ascending, broad, rather distant, *yellowish*, then ochraceous.—*Cooke Illust. t. 466, a.*

Amongst moss. Epping Forest.

Pileus about  $\frac{1}{2}$  inch. Stem 2-3 in. long, a line thick.

**Agaricus (Psilocybe) areolatus**, Klotzsch in Hook. *Fl.*, v. 112.

This rare and remarkable species, which has not been recorded as occurring anywhere since it was found by Klotzsch at Glasgow, has turned up in a garden at Stoke Newington. An admirable figure was secured by Mr. Worthington Smith, and will be published in the "*Illustrations*." The notes made at the time were, "Densely *cæspitose*. Pileus at first white, with the cuticle entire, at length rufous and cracking into areolæ, a much firmer plant than *A. spadicæus*, not brittle. Stem striate, pulverulent, especially towards the apex, hollow; gills with a distinct white edge, at first very pale, spores very dark, almost black, broadly almond-shape."

**Boletus pruinatus**, Fr. *Hym Eur.* 504.

Pileus convex, then plane, rigid, dry, bay brown, becoming *purple*, *umber-pruinose*; stem firm, a little ventricose, even, smooth, *variegated with red and yellow*; tubes adnate, yellow, pores minute, round.

In grassy woods. (W. G. Smith.)

Flesh white, turning slightly bluish or greenish.

**Boletus spadiceus**, Schæff., Grev. VIII. 4.

This species, heretofore recorded only for Scotland, has been figured by Mr. Worthington Smith from specimens found at Stoke Pogis in 1872.

**Polyporus (Hispidi) Herbergii**, Rostk. Poly. t. 18, Grev. VIII. 5.

This species, recorded hitherto only for Scotland, was found by the late Mr. F. Currey in Kent. Has since been found by Mr. Howse, near Guildford, and by ourselves last year at Langley, Herts. It can hardly be considered a form of *P. spongia*, to which Fries has referred it, but is related rather to *P. cuticularis*.

## SYNOPSIS PYRENOAMYCETUM.

(Continued from p. 45.)

We prefer to regard the *Dothideaceæ* as including three sub-families, viz. :—

1. *Dothideoidei* = the more typical subfamily.
2. *Rhytismoidei* = embracing the six or seven genera into which it is probable that the old genus *Rhytisma* will be divided, but which some authors relegate to the *Discomycetes*.
3. *Stigmatoidi* = with the perithecia more or less discrete. Through this latter the *Dothideaceæ* are united in one direction with the *Perisporiaceæ*, and in another with the *Sphæriaceæ* (in a broad sense).

The affinities of *Rhytismoidei*, are, to our mind, stronger in the direction of *Dothidea* than in that of *Phacidium*. Although this may be very much a matter of opinion.

The following species require correction :—

4270. *Dothidea iridis*, Schwein. Herb. Berk. 9300.

According to this specimen is *Darlucalium*.

4261. *Sphæria constellatio*, Berk. in Herb. 9071, is the same species with *Micropeltis orbicularis*, Cooke, *Myiocopron orbiculare*, Sacc. Syll. No. 5360.

5171. *Dothidea subcuticularis*, Schwein. No. 1940.

Is most probably an *Asteroma*.

5176. *Dothidea Polygalæ*, Schwein.

Should be transferred to the neighbourhood of *Asteroma*.

5211. *Dothidea Phytolaccæ*, Schwein. Herb. Berk. 9209.

Appears to be a *Phoma*.

*Dothidea maculæformis* (Desm.) Fckl. Fun. Rhen. No. 1023.

This is *Venturia Johnstoni* (B. & Br.)

5247. *Sphæria examinans*, Berk. & Mont. }

5395. *Sphæria morbosus*, Schwein. }

We cannot accept these two species amongst *Dothideaceæ*. The former is allied to *Melogramma* and the latter to *Gibbera*.

**Hendersonia?** *arundinis* (Lev). *Dothidea arundinis*, Lev. *Demid. Voy.* II. 109, t. v. f. 3. Herb. Berk. 9193

Maculis flavo-fuscentibus vel nullis. Peritheciis erumpentibus hypo-et epiphyllis globosis albo-farctis, 1-2 serialibus, stromati atro conjunctis, ostioliis obsoletis. Sporidis cylindricis, utrinque rotundatis, triseptatis, plerumque curvulis, hyalinis ( $0.035 \times 0.005$  mm.).

In foliis *Phragmitis*. Inkerman.

*Dothidea geographica*, *Fries Syst. Myc.* II., 560.

Has only minute stylospores, and appears to be a *Phoma*.

*D. epilobii*, *Fr. Scler. Succ.* No. 421.

There are small membranaceous perithecia on the black spots, which contain small pyriform asci with immature sporidia. Probably either *Læstadia* or *Sphærella*.

*D. diospyri*, *Berk. & Curt.* in Herb. Berk.

There are no cells (pseudo-perithecia), and no fruit of any kind, only the blackened spots. It has somewhat the appearance of a *Dothidea* or *Asteroma*, preferably the latter.

*D. catalpæ*, *Berk. & Curt.* in Curtis' Catalogue, 151.

Similar in character to *D. diospyri*, but equally without cells or fruit.

5166. *D. abortiva*, *Desm.*

Several specimens have been examined, and nothing found but a structure resembling that of a *Sclerotium*, and no indication of fruit.

*D. anethi*, *Fries.* (*Sphæria anethi*, *Pers.*)=*Phoma*.

Does not belong to *Dothideaceæ*. Not a trace of asci to be found.

5189. *D. solidaginis* (*Schw.*) in Herb. Berk.

Nothing found beyond a structure closely resembling *Sclerotium*.

5229. *D. culmicola*, *Schwein.* in Herb. Berk. No. 9211.

Has the habit of *Leptostroma*, but without fruit. Cannot pertain to this family even if thecasporous.

*Dothidea ventricosa*, *Mont.* in Herb. Berk. No. 9177.

On branches of *Ricinus*. Is a species of *Physalospora*.

5170. *Dothidea* (*Microdothis*) *melastomatis*, *Kunze & Fr.* in Herb. Kewensis.

Ascis amplis, clavatis. Sporidiis ellipticis, medio constrictis, fuscis ( $0.026 \times 0.01$  mm.).

*Phyllachora* (*Dothidella*) *bullata*, *Fr. (nee Berk.)* in Herb. Berk. 9112.

Ascis clavatis. Sporidiis sublancoelatis, medio constrictis, hyalinis ( $0.02 \times 0.007$  mm.).

***Homostegia nigerrima*** (*Currey.*)

*Dothidea Jerdoni*, *Blox.* in Herb. Berk.

*Dothidea stictophora*, *B. & Br.* in Herb. Berk.

*Pleospora nigerrima*, *Sacc. Syll.* No. 3838.

Imperfectly and inaccurately described by Currey. There are

but few and very short hairs on the confluent stroma. The structure is manifestly that of *Dothidea*. Sporidia hyaline, very rarely with a transverse septum.

The following additions will have to be made:—

1084. *Phyllachora Lespedezæ* (Schw.). Sacc. Syll. 4269.

Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis,  $\cdot 02 \times \cdot 01$  mm.

1081. *Phyllachora trifolii* (Pers.) Sacc. Syll. 5184.

Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis,  $\cdot 01$ – $\cdot 012 \times \cdot 005$  mm.).

From specimen in Herb. Berkeley.

1124. *Phyllachora caricis* (Fr.) Sacc. Syll. 5242

Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis.

1065. *Phyllachora xanthoxyli* (Lev.). *Sphæria xanthoxyli*, Sacc. Syll. 4453. Herb. Berk. 9078.

Ascis clavatis, octosporis. Sporidiis biseriatis, sub lanceolatis, continuis, hyalinis,  $\cdot 013 \times \cdot 003$  mm.

1051. *Phyllachora infectoria*, Cke.

Epiphylla. Stromatibus pulvinatis, convexis, irregularibus, confluentibus, atris, nitidis, loculis immersis numerosis, ostiolis obscuris. Ascis clavato-cylindricis. Sporidiis ellipticis, continuis, hyalinis ( $\cdot 012 \times \cdot 005$  mm.).

In foliis *Ficus infectoriae*. Ceylon.

1054. *Phyllachora laurina*, Cke.

Hypophylla, gregaria, erumpens. Stromatibus minutis, in maculis orbicularibus dispositis, atris, subangulosis, hemisphericis, intus albis. Ascis clavatis, subsessilibus. Sporidiis ellipticis, continuis, hyalinis ( $\cdot 016$ – $\cdot 018 \times \cdot 005$  mm.).

In foliis *Lauraceæ*. Barra.

(Spruce, 543).

1055. *Phyllachora Guatteriae*, Berk. *Dothidea Guatteriae*, Berk. in Herb., No. 9082.

Amphigena. Stromate convexo, atro, nitido ( $\cdot 5$  mm. diam.).

Ascis clavatis. Sporidiis biseriatis, ellipticis continuis, hyalinis,  $\cdot 016$ – $\cdot 018 \times \cdot 008$  mm.

In foliis *Guatteriae*. Ceylon.

1072. *Phyllachora vesicata*, Cooke.

Hypophylla. Maculae fusca, irregulares, confluentia. Stromatibus gregaris, atris, oblongo-angulatis, convexis, minutis; loculis immersis albis. Asci clavatis; sporidiis ellipticis, continuis, hyalinis,  $\cdot 01 \times \cdot 004$  mm.

In foliis *Hirtellæ vesicatae*. Amazons.

(Spruce, 615.)

1088. *Phyllachora Beaumontii* (B. & C.). *Dothidea Beaumontii*, Berk. in Herb. No. 9070.

Epiphylla. Stromate hemisphaerico-convexo, atro ( $\cdot 5$  mm. diam.) opaco, ad basim contracto. Ascis clavatis. Sporidiis inordinatis, ellipticis, continuis, hyalinis ( $\cdot 008$ – $\cdot 01 \times \cdot 004$  mm.).

In foliis *Cerasi*. Alabama, U.S.



1092. **Phyllachora exanthematica** (Lev.). Dothidea in Herb. Berk. No. 9088.

Hypophylla vel amphigena. Stromate elliptico, convexo ( $3 \times 4$  mm.) atro, nitido, lævi. Ascis subclavatis. Sporidiis ellipticis, continuis ( $.013-.018 \times .006$  mm.) hyalinis.

In foliis coriaceis. Marquesas and Mauritius.

The sporidia vary in the specimens from the two localities, chiefly in their length, but the external features are the same. We do not find it described by Leveille.

1093. **Phyllachora exsculpta**, Berk. Sacc. Syll. 5181.

Stromate orbiculari, nigro margine radiatim exsculpta, ostiolis papillæformibus centralibus. Ascis breviter clavatis, sessilibus. Sporidiis ellipticis, continuis (immaturis) hyalinis, circa  $.012 \times .004$  mm.

1103. **Phyllachora musæ** (Klotsch.). Sacc. Syll. 5183, 5243.

Ascis clavatis. Sporidiis ellipticis, rotundatis, continuis, hyalinis,  $.01-.012 \times .007$  mm.

1095. **Phyllachora interstitialis** (B. & C.). Dothidea interstitialis, B. & C. in Herb. Berk. 9085.

Hypophylla. Maculis atris, irregularibus, foliorum nervulis limitatis ( $2-3$  mm.), loculis paucis, stromate elevatibus, subnitidis. Ascis clavatis. Sporidiis ellipticis, continuis, hyalinis (immaturis, circ.  $.01$  mm. long).

In foliis. Cuba.

1119. **Phyllachora Luzulæ** (Rabh.) Sphæria Luzulæ, Rabh. Fungi Europæi, No. 533.

Ascis clavatis. Sporidiis ellipticis, utrinque rotundatis, continuis, hyalinis,  $.01 \times .005$  mm.

In foliis Luzulæ.

1128. **Phyllachora leptostromoides**, Cooke in Rav. N. A. Fungi.

Stromate irregulari, minuto, applanato, atro, subinde confluyente, ostiolis vix conspicuis. Ascis clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis  $.008 \times .003$  mm.

On fronds of *Pteris*. S. Carolina. (Rav. 1977.)

With just the appearance of a *Leptostroma*.

1173. **Phyllachora (Dothidella) Eugeniæ** (Thum.). Asterina Eugeniæ (Mont.), ex-herb Thuemen.

Amphigena. Stromate orbiculari, atro, ruguloso, subdepresso (ambitu nudo), loculis minutis. Ascis clavatis, octosporis. Sporidiis ellipticis, utrinque rotundatis, uniseptatis, hyalinis  $.018 \times .008$  mm.

On leaves of *Eugenia planipes*. Chili; Valdivia.

This is clearly not the *Asterina Eugeniæ*, Mont.; the fruit is different, and there is no radiating margin to the stroma.

1175. **Phyllachora (Dothidella) Osyridis**, Cooke.

Epiphylla, orbiculata, applanata, atra, punctato-rugosa, regulariter disciformis ( $2-3$  mm. diam.). Cellulis numerosis, minimis. Ascis clavatis octosporis. Sporidiis biserialibus, ovatis, uniseptatis, uno loculo multo minori, hyalinis  $.012 \times .006$  mm.

On living leaves of *Osyris compressa*. Cape of Good Hope.  
Sent by Prof. McOwan under the name of *Meliola amphitricha*, Fr.

1178. *Phyllachora (Dothidella) endocrypta* (Mont.). *Dothidea endocrypta*, Mont. in *Herb. Berk.* No. 9115.

Epiphylla, stromate discoideo, atro, opaco (5-8 mm. diam.), loculis minutis immersis. Ascis cylindrico-clavatis, octosporis. Sporidiis, biserialibus, ellipticis, uniseptatis, utrinque rotundatis, hyalinis, flavescentibus ( $\cdot 02 \times \cdot 005$  mm.).

In foliis. Guiana: (Leprieur.)

We do not find that this species has been anywhere described.

1179. *Phyllachora (Dothidella) Salvadoræ*, Cooke.

Amphigena, irregularis, prominula, atra, rugosa, hinc illic in circulos disposita, loculis tenuibus albis. Ascis clavatis ( $\cdot 06 \times \cdot 014$ ), octosporis; sporidiis ellipticis, uniseptatis, utrinque rotundatis, hyalinis ( $\cdot 012\text{--}\cdot 014 \times \cdot 006$  mm.).

On leaves of *Salvadora Persica*. Socotra.

1180. *Phyllachora (Dothidella) Berkeleyana*, Cooke. *Dothidea Baccharidis*, B. & C. in *Herb. Berk.* No. 9161.

Amphigena, gregaria. Stromate elevato, hemisphærico (4-7 mm. diam.), papillato-rugoso, opaco. Loculis minutis, plurimis immersis. Ascis clavatis. Sporidiis ellipticis, uniseptatis, hyalinis ( $\cdot 025$  mm. long).

In foliis *Baccharidis*. Cuba. (No. 920.)

1201. *Phyllachora (Auerswaldia) viridispora*, Cooke.

Epiphylla, sparsa, orbicularis, hemisphærica (1-2 mm. diam.), atra, rugosa, intus alba. Ascis clavatis octosporis. Sporidiis biserialibus, ellipticis, diu continuis, binucleatis, hyalino-virescentibus ( $\cdot 016 \times \cdot 0075$  ad  $\cdot 018 \times \cdot 008$  mm.), demum uniseptatis.

On living leaves. Jamaica. (D. Morris.)

1215. *Phyllachora (Roumegueria) dendritica*, Cooke.

Epiphylla, subrotunda, elliptica vel confluens, convexa, atra, nitida, in maculas dendroideas collecta, precipue supra nervulis foliorum disposita; intus alba, cellulis paucis. Ascis clavatis. Sporidiis sublancoatis, medio leniter constrictis, uniseptatis, binucleatis, demum triseptatis, hyalinis ( $\cdot 02\text{--}\cdot 022 \times \cdot 005$  mm.).

On coriaceous leaves. Brazil. (Burchell. No. 7768.)

1216. *Phyllachora (Roumegueria) Albizziae*, Cooke. *Dothidea vivensis*, var. *Albizziae*, Cooke.

Epiphylla, minuta, convexa, nitida (vix 1 mill. diam.), loculis paucis (1-4). Ascis clavatis, breviter stipitatis. Sporidiis lanceolatis, medio constrictis, uniseptatis, binucleatis, demum triseptatis hyalinis ( $\cdot 025\text{--}\cdot 027 \times \cdot 007$  mm.).

On living leaves of *Albizzia*. Natal. J. M. Wood.

1222. *Euryachora Lathyri* (Lev.), Cooke. *Herb. Berk.* No. 9198.

*Dothidea Lathyri*, Lev. *Demid. Voy.* II. 106, t. 5, f. 8.

Hypo-vel epiphylla. Peritheciis sparsis, hemisphericis, prominulis, astomis, albo fartis, in stromate maculæformi irregulari aterrimo immersis. Ascis elongatis, cylindricis. Sporidiis ovatis, sporidiolis duobus includentibus ( $\cdot 012 \times \cdot 008$  mm.).

In foliis *Lathyri*. Son-dagh.

Whether this is the same as *Physalospora Lathyri*, Mont. (Sacc. Syll. 1681), we cannot say. An examination of authentic specimens from Leveille results in placing it in *Dothideaceæ*.

1233. *Dothidea (Bagnisiella) cercidis*, Cooke.

Erumpens, orbicularis, hemisphæricis, demum centro depressa, atra, opaca, loculis paucis. Ascis clavatis. Sporidiis biserialibus, elliptico-lanceolatis, continuis, hyalinis ( $\cdot 03 \times \cdot 01$  mm.).

On branches of *Cercis canadensis*. Carolina, U.S.A. In Herb. Berk. No. 9030.\*

1236. *Dothidea Rhamni*, Mont. in Herb. Berk. No. 9173. D. clavuligera, B. & Br. in Herb. Berk. No. 9174.

Erumpens. Stromate discoideo vel elliptico, rugoso-papillato, atro, opaco (2 mm. diam.). Ascis cylindrico-clavatis, octosporis. Sporidiis sublanceolatis, continuis, hyalinis, sæpe 2-4 nucleatis ( $\cdot 02\text{--}\cdot 022 \times \cdot 005$  mm.).

Ad cortice *Rhamni*. France, England.

Found mixed with *Dichomera Saubinetii*. Possibly the sporidia are ultimately pseudo-triseptate, by division of the endochrome, as would appear from the English specimen, which has the fruit more mature than in the authentic specimen from Montague.

1243. *Dothidea (Bagnisiella) tessellata*, Hormosphæria tessellata, Lev. Ann. Sci. Nat., 4 Ser. xx. 297. (1863).

Conceptaculis gregariis, discretis, erumpentibus, globosis, tessellato-rimosis, macula albida convexa, demum nigra insidentibus, ostiolis (quando conspicuis) papillatis; ascis pallide viridibus; sporidiis globosis, concatenatis, lævibus, hyalinis.

Ad folia *Thibaudie floribundæ*. Nova Granada.

1270. *Dothidea Lonicerae*, Cooke.

Erumpens, suborbicularis, sæpe confluentibus, pulvinata, planiuscula, atra (1 mm. diam.), loculis sparsis, periphericis. Ascis clavatis, octosporis. Sporidiis sublanceolatis, medio constrictis, uniseptatis, fuscis ( $\cdot 022\text{--}\cdot 024 \times \cdot 009$  mm.).

On twigs of *Lonicera sempervirens*. Pennsylvania, U.S.A. (Michener. No. 4218.)

1280. *Homostegia Pelvetii* (Hepp.). Linds. Trans. Roy. Soc. Edin. xxiv. p. 450.

Ascis clavato-saccatis ( $\cdot 045 \times \cdot 012$  mm.), octosporis. Sporidiis ellipticis, uniseptatis, hyalinis vel subluteolis  $\cdot 011 \times \cdot 006$  mm.

Parasitic on *Sticta aurata*.

1284. *Homostegia? dubia*, Linds. Trans. Roy. Soc. Edin. xxiv. t. 30, f. 47-52.

Parasitic on *Sticta fossulata*, *S. granulata* and *S. rubella*. New Zealand.

*Asterina maculæformis* (Berk.). *Dothidea maculæformis*, Berk. Herb. No. 9128. (nec. Roberge.)

Epiphylla, atra, opaca, orbicularis, maculæformis. Stromate discoidea, maculis piceis orbicularibus insidente, fibrillis radiantibus ambiente. Ascis ovoideis ( $\cdot 02 \times \cdot 015$  mm.). Sporidiis ellipticis, continuis (? immaturis), hyalinis ( $\cdot 005 \times \cdot 008$  mm.).

In foliis *Drymidis*. Valparaiso.

This is clearly distinct from *Asterina compacta*, Lev., which it somewhat resembles in habit.

***Asterina quercigena* (Berk.).** *Dothidea quercigena*, in *Herb. Berk.* No. 9107.

Epiphylla vel amphigena. Perithecio orbiculari (1-2 mm.), convexo, rugoso, atro, apaco, margine radiante fibroso, ascis clavatis. Sporidiis ellipticis, continuis (immaturis), hyalinis ( $\cdot 01 \times \cdot 004$  mm.).

In foliis *Quercuum*. Sikkim.

***Asterina ? Lauri-borbonis*, Schwein.** Sacc. Syll. No. 5167. *Herb. Berk.* 9242.

***Asterina conspurcata*, Berk.** Sacc. Syll. No. 5178. *Herb. Berk.* 9114.

***Asterina tenella*, Cooke.**

Epiphylla, effusa, tenuis, atra. Peritheciis minutis ( $\cdot 03 \cdot 22$  mm.) applanatis, cum mycelio repente brunneo immixtis, ascis saccatis 4-8 sporis. Sporidiis (octosporis)  $\cdot 028 \cdot 03 \times \cdot 012 \cdot 014$  mm. (tetrasporis),  $\cdot 04 \times \cdot 022$  mm. pallide-fuscis.

On leaves of *Persea Carolinensis*. Carolina, U.S. (*Rav.* 2499 bis.)

### Fam. 3. DOTHIDEACEÆ, Fr.

#### Sub.-Fam. I. DOTHIDEOIDEI.

GEN. 1. **PHYLLACHORA**, Fekl. p.p.—Stroma subelypeatum vel breviter effusum, plerumque phyllogenum.

Sub-Gen. 1. MAZZANTIA, Mont.—Stroma subelypeatum, initio epidermide tectum, tenui carbonaceum, plerumque caulicolum.

\* *Sporidia continua*, hyalina.

1036. galii, Mont. ... 5083	1040. rhytismoides, Not... 5088
1037. napelli, Ces. ... 5084	1041. deplanata, Not. ... 5089
1038. Niesslii, Thum. ... 5085	1042. Gougetiana, Mont. 5090
1039. sepium, S. & P. ... 5086	

\*\* *Sporidia uniseptata*, hyalina.

1043. Bicchiana, Not. ... 5278
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Sub-Gen. EUPHYLLACHORA.—Stroma breviter effusum plerumque phyllogenum.

\* *Sporidia continua* hyalina.

a. in dicotyledoneis.

1044. ulmi (Duv.) ... 5091	1052. demersa, Corda ... 5094
1045. rhytismoides, Ca. 5093	1053. tetrantheræ, B. & Br. 5095
= microcenta, B. 5098	1054. laurina, Cke. Grev. xiii.
1046. repens, Corda ... 5108	1055. Guatteria, B. & Br.,
1047. aspidea, B. ... 5110	Grev. xiii. 63.
1048. Thwaitesii, B. ... 5111	1056. incarcerationata, B. ... 5101
1049. ficum, Niessl. ... 5112	1057. granulosa, Lev. ... 5102
1050. Decaisneana, Lev. 5113	1058. explanata, Lev. ... 5103
1051. infectoria, Cke. Grev. xiii.	1059. lonchotheca, Speg. 5104



\*\*\* *Sporidiis ignotis.*

## a. In foliis arborum.

- |   |                                       |
|---|---------------------------------------|
| 1131. rhytismoides, <i>Chev.</i> 5157   | 1136. acervulata, <i>Schw.</i> 5162   |
| 1132. asteromorpha, <i>Schw.</i> 5158   | 1137. latitans, <i>Fr.</i> ... 5164   |
| 1133. impressa, <i>Fr.</i> ... 5159     | 1138. annulata, <i>Cke.</i> ... 5165  |
| 1134. Colensoi, <i>Berk.</i> ... 5160   | 1139. abortiva, <i>Desm.</i> ... 5166 |
| 1135. orbiculata, <i>Schw.</i> ... 5161 | 1140. xylostei, <i>Fr.</i> ... 5180   |

## b. In foliis herbarum.

- |   |   |
|---|---|
| 1141. brachystemonis, <i>Schw.</i> ... 5185 | 1144. angelicæ, <i>Fr.</i> ... 5193     |
| 1142. tragacanthæ, <i>Lev.</i> 5191         | 1145. podagrariæ, ( <i>Roth.</i> ) 5194 |
| 1143. Morthieri, <i>Fckl.</i> ... 5192      | 1146. campanulæ, <i>D. C.</i> ... 5195  |
|   | 1147. punctiformis, <i>Fckl.</i> 5196   |

## c. In caulibus herbarum.

- |  |                                      |
|--|--------------------------------------|
| 1148. eupatorii, <i>B. &amp; C.</i> ... 5198 | 1152. chenopodii, <i>Schw.</i> 5208  |
| 1149. stipata, <i>Fr.</i> ... 5199           | 1153. elegans, <i>Schw.</i> ... 5313 |
| 1150. deusta, <i>Fr.</i> ... 5200            | 1154. ramosa, <i>Schw.</i> ... 5215  |
| 1151. phlogis, <i>Schw.</i> ... 5201         | 1155. effusa, <i>Schw.</i> ... 5222  |

## d. In monocotyledoneis.

- |                                       |                                      |
|---------------------------------------|--------------------------------------|
| 1156. aristidæ, <i>Schw.</i> ... 5230 | 1159. thanotophora, <i>Lev.</i> 5241 |
| 1157. setariæ, <i>Sacc.</i> ... 5232  | 1160. membranacea, <i>Ces. Born.</i> |
| 1158. panici, <i>Schw.</i> ... 5238   |                                      |

\*\*\* AUERSWALDIA. *Sporidia continua, fusca.*

- |                                       |  |
|---------------------------------------|--|
| 1161. chæmeropis, <i>Cooke</i> 5248   | 1163. scabies, <i>K. &amp; C.</i> ... 5250 |
| 1162. Pringlei, <i>Peck.</i> ... 5249 |  |

\*\*\* DOTHIDELLA. *Sporidia uniseptata, hyalina.*

## a. In dicotyledoneis.

- |   |   |
|---|---|
| 1164. tinctoria, <i>Tul.</i> ... 5251               | 1178. endocrypta, <i>Mont., Grev.</i> xiii. 65. |
| 1165. hieronymi, <i>Sp.</i> ... 5252                |   |
| 1166. betulina, <i>Fr.</i> ... 5256                 | 1179. salvadoræ, <i>Cke., Grev.</i> xiii. 65.   |
| 1167. achalensis, <i>Sp.</i> ... 5257               |   |
| 1168. marginata, <i>Lev.</i> ... 5258               | 1180. Berkeleyana, <i>Cke., Grev.</i> xiii. 65. |
| 1169. australis, <i>Sp.</i> ... 5259                | — <i>baccharidis</i> , <i>B. &amp; C.</i>       |
| 1170. tephrosia, <i>Lev.</i> .. 5260                | 1181. orbis, <i>Berk.</i> ... 5314              |
| 1171. sordidula, <i>Lev.</i> ... 5265               | 1182. millepunctata, <i>B. &amp; C.</i> 5273    |
| 1172. pulverulenta, <i>B. &amp; C.</i> 5267         | 1183. rhynchosia, <i>Lev.</i> ... 5274          |
| 1173. eugenia, <i>Thum., Grev.</i> xiii.            | 1184. osbeckiæ, <i>B. &amp; Br.</i> 5275        |
| 1174. scutula, <i>B. &amp; Curt.</i> 5270           | 1185. gracilis, <i>Sp.</i> ... 5277             |
| 1175. osyridis, <i>Cooke, Grev.</i> xiii.           | 1186. bullata, <i>Fries</i> ... 5180            |
| 1176. Zollingeri, <i>Mont.</i> & <i>B.</i> ... 5271 | 1187. bullulata, <i>Berk.</i> ... 5315          |
| 1177. oleandrina, <i>D.R. &amp; M.</i> 5272         | 1188. nitidula, <i>Lev.</i> ... 1886            |

## b. In monocotyledoneis.

- |  |  |
|--|--|
| 1189. fallax, <i>Sacc.</i> ... 5253    | 1191. agrostidis, <i>Fckl.</i> ... 5255  |
| 1190. helvetica, <i>Fckl.</i> ... 5254 | 1192. elettaræ, <i>B. &amp; Br.</i> 5256 |



1233. tamaricis, *Cooke*. ... 5080    1235. viburni-dentata,  
1234. rhamni, *Mont.* = *clavuli-*    *Schiz.* ... 5326  
    *gera*, *B. & Br.* ... 5326    1236. moriformis, *Ack.* ... 5082  
    *b. foliicolæ.*

1237. catervaria, *B.* 1783. 5109    1240. coccodes, *Lev.* ... 1717  
1238. drymidis, *Lev.* ... 5081    = *cubensis*, *B.*  
1239. melastomatum, *Lev.* 5170    1241. tessellata, *Lev.*, *Grev.* xiii.

\*\* AUERSWALDIA. *Sporidia continua, fusca.*

1242. robiniae, *Schw.* ... 5324    1243. oceanica, *Ces.* ... 5078

\*\* PLOWRIGHTIA. *Sporidia uniseptata, hyalina.*

1244. ribesia, *Pers.* ... 5285    1249. periclymeni, *Fckl.* 5290  
1245. virgultorum, *Fr.* ... 5286    1250. hippophaës, *Pass.* 5291  
1246. mezerei, *Fr.* ... 5287    1251. Martianoffiana, *N.* 5294  
1247. insculpta, *Wallr.* 5288    1252. tuberculiformis, *Ellis* 5295  
1248. berberidis, *Wahl.* 5289    1253. polita, *Fr.* ... 5316

\*\* EUDOTHIDEA. *Sporidia uniseptata, fusca.*

1254. sambuci, *Pers.* ... 5296    1261. smilacicola, *C. & Ger.* 5303  
    *var. zealandiæ, Cke.*    1262. baccharidis, *Cke.* 5304  
1255. amorphæ, *Rabh.* ... 5297    1263. puccinioides, *D. C.* 5305  
1256. coluteæ, *B. & C.* ... 5298    1264. rutæ, *Mont.* ... 5306  
1257. tetraspora, *B. & Br.* 5299    1265. corylina, *Cke. & Hk.* 5307  
    = *crystallophora*, *Berk.*    1266. artemisiæ, *Schw.* 5317  
1258. etrusca, *Not.* ... 5300    1267. bignoniæ, *Fr.* ... 5321  
1259. linderæ, *Ger.* ... 5301    1268. rhuina, *Schw.* ... 5325  
1260. frangulæ, *Fckl.* ... 5302    1269. loniceræ, *Cooke, Grev.* xiii

\*\*\* MONTAGNELLA. *Sporidia 1-3 septata.*

*a. loculis polyascis.*

1270. curumannel, *Sp.* ... 5330    1271. durissima, *B.* ... 5345

*b. loculis monoascis.*

1272. monspeliensis, *Seynes* 5346

\*\*\* CURREYA. *Sporidia muriformia, fusca.*

1273. conorum, *Fckl.* ... 5347    1274. excavata, *Cke. & Ell.* 5348

\*\*\*\* SPECIES INCERTÆ.

1275. atra, *Fr.* ... 5319    1277. paradoxa, *Fr.* ... 5322  
1276. myriococca, *Mont.* 5320    1278. encelium, *Schw.* 5327

GEN. 4. HOMOSTEGIA, *Fckl.* Parasiticum. Stroma subplanum, vel hemisphericum fragilissimum.

\* *Sporidia uniseptata, hyalina.*

1279. Pelvetii (*Hepp*). *Grev.* xiii. 66.

\* *Sporidia uniseptata, fusca.*

1280. liohenum, *Somm.* 5339



\* \* *Sporidia* 3 septata, fusca.

1281. *Piggotii*, B. & Br. 5338

\*\* *Sporidia* multiseptata, hyalina.

1282. *nigerrima*, B. & Br. 2838

\*\*\* *Sporidia* ignota.

1283. *dubia*, Linds. Grev. xiii. 66.

GEN. 5. **RHOPOGRAPHUS**, Ntke. *Stroma lineatum*.

\* MONOGRAPHUS. *Sporidia continua*, hyalina.

1284. *aspidiorum* (Lib). 4585

\*\* SCHIRRHIA. Ntke. *Sporidia uniseptata*, hyalina.

1285. *rimosa*, A. & S. ... 5280    1288. *Castagnei*, Mont. ... 5293

1286. *depauperata*, Desm. 5281    1289. *calophylli*, B. & Br. 5284

1287. *striæformis*, Niessl 5282

\*\* GENUINA. *Sporidia* 3-5 septata, flava.

1290. *filicinus*, Fr. .. 5334    1292. *clavisporus*, Pk. ... 5336

1291. *hysterioides*, Ces. 5335    1293. *hysteriiformis*, Karst. 5337

\*\* OPHIODOTHIS. *Sporidia filiformia*.

1294. *Haydeni*, B. & C. 5361

## XYLARIÆ ADDENDA.

The following omitted species should be inserted in the places indicated in the list published at page 11 :—

601.\* **Xylaria** (**Xyloglossa**) *Trianae*, Lev. Ann. Sci. Nat. xx. (1863), p. 292.

618.\* **Xylaria** (**Xyloglossa**) *cylindrica*, Lev. Ann. Sci. Nat. xx. (1863), p. 292.

679.\* **Xylaria** (**Xyloglossa**) *oleiformis*, Lev. in Moritz Syst. Verz. (1846).

736.\* **Xylaria** (**Xylodactyla**) *monticulosa*, Lev. Ann. Sci. Nat. xx. (1863), 292.

738.\* **Xylaria** (**Xylodactyla**) *metæformis*, Lev. Ann. Sci. Nat. xx. (1863), 292.

769.\* **Thamnomycetes** *melanurus*, Lev. Ann. Sci. Nat. xx. (1863), 292.

849.\* **Nummularia** *discoidea*, Lev. Ann. Sci. Nat. xx. (1863), 292.

## NEW AND RARE BRITISH FUNGI.

BY W. PHILLIPS, F.L.S., AND CHARLES B. FLOWRIGHT.

(Continued from p. 54.)

259. *Puccinia Schoeleriana*, *Flow and Magnus*.This name was misprinted at p. 54 as *P. Schraetiana*.260. *Cæoma laricis* (*Westd.*).Sori small,  $\frac{1}{2}$  to 5 mill. long, on yellow spots, surrounded by the whitish epidermis. Spores roundish or elliptical, often rather angular, finely verrucose, orange yellow, 16 to 24 mk. long by 12 to 17 mk. wide.

Around the periphery of the sori are a number of somewhat clavate empty cells, crowded together and superimposed.

On *Pinus Larix* L. Near King's Lynn. Shrewsbury, and Forres, N.B. May, 1884.261. *Peziza* (*Cochlearia*) *aurantia*. *Oed.*Var. *atro-marginata*. *Phil. and Flow., in Gard. Chron.*, Feb., 1882.

Cups from 4 lines to 1 in. broad; disc blood-red, wrinkled; margin black owing to the presence of minute septate bristle-like hairs; the tuberculate sporidia are frequently furnished with thread-like appendages at their extremities, pointing in opposite directions obliquely to the axis of the sporidia.

On a clay bank. Clenchwarton, Norfolk. February, 1882.

262. *Peziza* (*Humaria*) *Occardii*, *Kalch.*Cups scattered or gregarious, sessile, lenticular, glabrous; becoming undulate-lobate, reddish brown, when dry blackish brown; asci cylindrical, broad; sporidia 8, broadly elliptical, smooth ( $\cdot 02\text{--}\cdot 022 \times \cdot 011\text{--}\cdot 012$  mk.); paraphyses filiform, clavate apices.*Peziza Occardii*, Grevillea III., fig., 207. Cooke, *Mycogr.*, fig., 47. *Peltidium Occardii*, Kalchbrenner in Rabh., F.E. 521; Karst. *Myc. Fenn.* p. 84.

On wood in damp places. Forres. N.B. The Rev. Dr. Keith.

Cups 2 to 3 lines broad.

263. *Peziza* (*Dasyscypha*) *Cupressi*, *Batsch.*Gregarious, sessile or shortly stipitate, hemispherical, becoming plane, between fleshy and waxy; margin obtuse entire, glabrous, villous at the base; disc orange-yellow, paler externally; asci cylindrical; sporidia 8, globose, smooth ( $\cdot 01\text{--}\cdot 012$  mk.); paraphyses filiform, slender.On *Juniperus Sabina*. Brandon. Mr. Norgate. 1883.264. *Peziza* (*Dasyscypha*) *scrupulosa*, *Karst.*Gregarious, slender, sessile, subhemispherical or sub-solenei-form, whitish or yellowish white, or greyish, rough with papillæ; asci cylindraceo-clavate, or subcylindrical; sporidia elongated, or aciculari elongated ( $\cdot 014\text{--}\cdot 008 \times \cdot 001\text{--}\cdot 002$  mk.); paraphyses very slender.*Peziza scrupulosa*, Karst. *Monogr. Pez.* p. 178; *Helotium scrupulosum* Karst. *Myc.*, *Fenn.* p. 152. *Peziza tomipora*, Phillips in Herb.

On dead thornwood. Scarboro'. Mr G. E. Massee.

Cups 2 mm. broad, clothed with very minute white hair, which break up at the joints into two or three oblong portions.

265. *Peziza (Dasyscypha) prasina*, Quelet.

Cups sessile, appanate, thin, waxy, soft, olivaceous, clothed with flexuous, hyaline, afterwards fiery-red hairs; hymenium plane, greenish-brown, then of a beautiful green, at length becoming pale; sporidia fusiform, curved ( $\cdot 012$  mk.) *Lachnella prasina*, Quelet. Asso. Franc. l'avan. des sc. 1880.

On *Glyceria fluitans*. Mr. Cedric Bucknall.

266. *Peziza callunigena*. Karst.

Cup solitary, subglobose, sessile, blackish-brown, naked, striate, mouth connivent; asci cylindrical; sporidia 8, filiform, attenuated at the apices, straight, simple or faintly 3-septate ( $\cdot 04\text{--}\cdot 06 \times \cdot 0025$  mk.); paraphyses filiform, slightly thickened above.

On branches of *Calluna vulgaris*. Near Clunbury, Salop. 1882.

Karst., Mongr., Pers. p. 171. *Crumenula callunigena* Karst., Myco. Fenn. p. 212.

Cups  $\frac{1}{4}$  of a line broad. Seated on a brown tapesium, and resembles externally *Peziza Rosæ*, Pez.

267. *Peziza (Mollisia) Mali* (Rehm).

Gregarious, small, at first globose, then urceolate, finally more or less expanded; margin when dry involute, paler, scabrous; disc greenish-yellow; asci clavate; sporidia oblong, obtuse, hyaline,  $\cdot 009 \times \cdot 003$  mk. Paraphyses filiform. *Pezizella Mali*, Rehm. Ascomycetes No. 460.

On dead holly bark. Near Shrewsbury.

268. *Peziza (Mollisia) filicum*, Phil. n. s.

Gregarious, minute, at first globose, then cupulate, at length expanded, white, glabrous; asci clavato-cylindrical; sporidia 8, oblongo-elliptical, straight or curved, 2-3 nucleate, becoming pseudo 1-2 septate; paraphyses extremely slender.

On stems of *Lastrea Filix-mas*. Shobden, Herefordshire.

Cups 1-3 mm. broad.

This differs from *Peziza Aspidiicola*, B. & Br. in the perfectly glabrous exterior of the cups, and the much larger and nucleated sporidia.

269. *Peziza (Mollisia) jugosa*, n. s.

Crowded, globose, vertically rugose, scabrous, black, mouth contracted, disc cinereous; asci clavate; sporidia 8; oblongo-elliptical or fusiform, 3-5 nucleate, becoming 3-5 pseudo-septate,  $\cdot 014\text{--}\cdot 018 \times \cdot 003\text{--}\cdot 005$  mk. Paraphyses numerous, adherent.

On dead herbaceous stems. King's Lynn.

Cups 2 mm. broad. This is near *P. atrata*.

270. *Helotium rhodoleucum* Fr. Sys. Myc. II. 127.

Stipitate, slender, rosy-white, disc plane, stem equal; asci cylindraceo-clavate; sporidia 4 to 8, oblongo-elliptical,  $\cdot 01\text{--}\cdot 014 \times \cdot 004\text{--}\cdot 005$  mk. Paraphyses filiform.

Substance watery pellucid; stem glabrous, 1 line long, frequently reaching to 3 lines. Cup orbicular, entire, 1-2 lines broad.

On decayed stems of *Equisetum*. Shelton Rough, n. Shrewsbury. April.

271. *Cenangium urceoliformis* (Karst.).

Scattered, commonly solitary, erumpent, sessile or subsessile, subspherical, nigricant, fusco-furfuraceous, becoming concentrically sulcate and naked, at first closed, then opening with a connivent mouth; disc pallid-cinereous; asci cylindrical; sporidia filiform septate,  $0.065 \times 0.002$  mk. Paraphyses filiform slender, often furcate.

*Peziza urceoliformis*, Karst. Mongr. Pez., 172; *Crumenula urceoliformis*, Karst., Myc., Fenn., 218.

On stems of *Vaccinium vitis idæa*. Grantown. N.B. Rev. Dr. Keith.

The sporidia in our specimens are very much larger than those in Dr. Karsten's, and it occurs on a different species of *Vaccinium* but otherwise it answers to the description.

272 *Phacidium striatum*, n. s.

Scattered, orbicular, rugoso-striate, splitting into 5-6 laciniae; disc fuliginous; asci clavate, attenuated towards the summit, sporidia 8, lanceolate, simple or 1 septate,  $0.025-0.03 \times 0.002-0.004$  mk. Paraphyses filiform, curved at the apices, numerous.

On dead stems of *Rubus*. Dinmore, Herefordshire.

This bears some resemblance externally to *Phacidium rugosum* Fr., but has totally different sporidia.

273. *Stictis pteridina*, Phil. & Buck.

Scattered, slightly immersed, circular or elongated, irregular, open; disc pallid-brown, not deeply depressed; margin membranaceous; asci broadly clavate; sporidia 8, biseriate, clavate or clavato-fusiform, six or seven times pseudo-septate, or muriform,  $0.028-0.044 \times 0.005-0.009$  mk. Paraphyses adherent. *Stictis Pteridina*, Phil. and Buck., in Fungi of the Bristol District pt. vi.

On *Pteris aquilina*. Leigh Wood near Bristol. Mr. Cedric Bucknall.

274. *Capnodium Juniperi*, n. sp.

Perithecia globoso-cylindrical, contracted at the base, about 200 mik. high by 100 mik. wide, seated upon a thick dense felt of black mycelium, of which numerous black septate hyphae are attached to the base of the perithecia; asci ovate  $50 \times 20$ , sporidia oval with pointed extremities, brown triseptate, biseriate  $25 \times 10$  mk.

On Juniper twigs. Forres. Rev. Dr. Keith.

The mycelium envelops the twigs in a thick woolly black mass, in which are often entangled the fallen leaves of the juniper. The antennaroid threads of which this mass is composed are possibly *A. pithyophila*, Nees.

275. *Entypa velutina* (Wallr.), Sacc., Fungi., Venet., Ser. iv., p. 16. *Fungi Ital.*, t. 472., Wallr., Fl. Crpt., No. 4066.

Stroma widely extended, perithecia globose, black, sunk in the wood, shortly attenuated in the neck, ostiola conico-rounded smooth, shining, just emerging; asci fusiform, stipitate, sporiferous part  $35 \times 4.5$ : spores sausage shaped, pale olivaceous,  $7-9 \times 2$ . Slightly curved.

*Conidia Trichosporium velutum*, rendering the surface of the matrix brown and velvety. Conidia obovate brown  $6 \times 4-5.5$ .

On *Acer campestre*.

276. *Sordaria Sparganicola*, N. Sp.

Perithecia black, globose, superficial, covered with black matted hairs, ostioli prominent rounded: sporidia, elliptical, dark brown, truncate at one end, from which springs a cylindrical hyaline appendage. Sporidia,  $12 \times 8$  mm.

On dead *Sparganium*. Mr. Bucknall, Yattam, July, 1881.

277. *Anthostoma Italicum*, Sacc. & Speq. Michel I., 326, *Fungi Ital.*, t. 165., Sacc. Syll., I., p. 297.

Stroma superficial, variously effused, black, perithecia in groups decorticating the stems in which it occurs, subimmersed, globoso-depressed  $\frac{1}{3}$  to  $\frac{1}{2}$  mill. in diameter, papillate black; asci cylindrical  $80-100 \times 8-10$  shortly stipitate, apex obtuse and sub-trifoveolate, packed between the filiform paraphyses, octosporous: sporidia ovate, oblong,  $25 \times 7-8$  curved, brownish, 2, rarely 1, nucleate, provided at both ends with a very short hyaline appendage.

Near Bristol. Mr. Bucknall, 1882.

278. *Phomatospora endopteris*, N. sp.

Perithecia globose, deeply buried in the stem, ostioli very minute; neck long and cylindrical, reaching the surface; asci cylindrical,  $30 \times 5$ . Sporidia oblong, oval, hyaline, simple, uniseriate,  $10-11 \times 3$  mill.

On *Pteris aquilina*. Mr. C. Bucknall. Leigh Wood, April, 1882.

279. *Didymella proximella* (Karst.), Sacc. Syll. I., p. 558, *Sphaerileia* Prox. Kurst. Myc. Fenn. II., p. 177, *Sp. hyperopta* Rehm. Ascom. No. 348, *Didymosphaeria Kunzei* Niessl. Hedwigia, 1866, p. 106, Rab. Ets. 2039.

Perithecia amphigenous, scattered minute, spherical, papillate, pertuse, black,  $100-200$  mill. in diameter; asci subsessile, oblongo-clavate,  $70-100 \times 16-22$ . Sporidia eight, uni- or biseriate, subovoido-oblong, apex slightly but obtusely attenuated, unisepate, superior division rather the larger, 2 to 4 nucleate, constricted at the septum,  $20-24 \times 8-10$ .

On *Carex ampullacea*. Forres. Rev Dr. Keith. On *C. hirta*, King's Lynn. Comes near *Sp. anarithma*, B. & Br.

280. *Didymosphaeria Winteri*, Niessl. Neue Kernpilze, p. 165. Sacc. Syll. I., p. 702.

Perithecia scattered or rather gregarious, minute, hemispherical, then depressed, covered by the epidermis at first; matrix not discoloured, ostioli papillate, perforate; coriaceo-membranaceous, black; asci clavate, stipitate, octosporous  $60-80 \times 10-12$ ; sporidia bi-rarely uniseriate, lanceolate or oblong lanceolate, rather obtuse, centrally, or rather above the centre, unisepate, constricted, straight or slightly curved, greenish-yellow or olivaceous,  $11-14 \times 4\frac{1}{2}-5$  mk., paraphyses numerous, rather narrow.

On dead potato stems. Mr. A. Croall. Stirling, N.B.

281. *Melanconis aceris*, N. sp.

Stroma valsooid, black, suborbicular or conico-truncate, 2-5 mill. in diameter, corticolous or lignicolous, circumscribed by a black line. Perithecia  $\frac{1}{3}-\frac{1}{2}$  mill. in diam., 5-15 in a group; ostioli minute;

asci clavate, 65-70  $\times$  10; sporidia hyaline, uniseptate, nucleate, slightly constricted, elliptical, 12-15  $\times$  4-5, not appendiculate.

On *Acer*. Mr. W. B. Grove. 1888.

282. *Diaporthe (Chorostate) pustulata* (Desm.), Sacc. *Sp. punctulata*, Desm. 13. Not., 70, 1846. *Aglaospora pustulata*, Tul. *Carp. II.*, p. 163. *Sacc. Syll. I.*, p. 610.

Erumpent, pustulate, scattered in the pallid certical stroma, circumscribed by a black line; disc subconvex, black, perithecia, 4-12, crowded in the middle, ostiola prominent, rather thick, umbilicate; nucleus white, then blackish; asci oblong, cylindrical, obtuse, octosporous; sporidia fusiform, 4 nucleate hyaline, not appendiculate, 16-19  $\times$  3-4.

On *Acer pseudoplatanus*. Leigh Down. C. Bucknall. 1882.

283. *Diaporthe (Euporthe) discors*, Sacc. = (*D. rumicis*, Plow. in *Grev. VII.*, p. 197. *Sacc. Syl. I.*, p. 644.)

Stroma variously effused and interrupted, blackening the surface of the stems, not surrounded by a black line beneath; perithecia few, globose,  $\frac{1}{2}$  mill. in diameter; ostiola scarcely existing, punctiform; asci fusiform-clavate, 60-62  $\times$  10-11, without paraphyses, octosporous; sporidia fusiform, curved, rather obtuse, 17-18  $\times$  4-5, 4-nucleate hyaline.

On *Rumex obtusifolius*. Castle Rising.

284. *Diaporthe (Tetrastaga) obscurans*, Sacc. *Syll. I.*, p. 675. *Fungi Ven. Ser. IV.*, p. 7.

Stroma widely spreading round the affected branch, limited by a black line; perithecia discrete, in clusters of 4 to 6, surrounded by a black line, forming a slightly elevated but obscure swelling under the bark, globose, depressed,  $\frac{1}{2}$  mill. in diameter, black; ostiola very short, not projecting above the bark, but just piercing it; asci widely fusiform; octosporous 45-50  $\times$  12 mill.; sporidia biseriate, rarely obtusely uniseriate; fusiform, rather obtuse at both ends, 12  $\times$  4 $\frac{1}{2}$ -5 mill., uniseptate, very slightly constricted, 4-nucleate, hyaline.

On ash. Forres. Rev. Dr. Keith.

285. *Leptosphaeria prætermissa* (Karst.), Sacc. *Syll. II.*, p. 26.

Perithecia clustered, covered by the cuticle, which is more or less discoloured, spherical, base flattened; ostiola prominent, but often obsolete, widely perforate, smooth, even, black, 5 mill. wide; asci cylindraco-subclavate, 110  $\times$  10-11 mill.; sporidia 8, uniseriate oblong, obtuse at both ends, straight or curved, 3-septate, more or less constricted at the septa, very pale, yellowish-brown, 18-32  $\times$  7-10; paraphyses crowded, sub-coalescent.

On *Rubus idaeus*. Rev. Dr. Keith. Forres. June, 1882.

Comes near *Sp. abbreviata*, Cooke, but is not in lines, nor are asci saccate.

\* *Sphaeria suviatilis*. Ph. & Pl. *Grev. x.*, p. 73, is *Sphaeria Lomanes* (Cohn. & Wor.), *Beitr. zu Morph. and Phys. d. Pilz.* III., p. 1., t. 1.

286. *Zignoëlla inculpata* (Fr.), Sacc. *Syll. II.*, p. 255.

Perithecia semi-immersed, globose, brownish-black, papillate, then pertuse, the upper part falling off; asci sessile, oblongato-cylindrical, 150 long by 15 to 20 mill. wide; sporidia eight, ob-

liquely uniseriate, curved, hyaline or pale yellowish, consisting of two elongato-subfusiform nucleate bodies, connected by a long, narrowly contracted isthmus, which is at length divided in the middle by a septum, 70 mill. long by 7-8 wide.

Fries Elenchus ii., p. 95. Oudem. Bydrage voor van Flora Nederland. Nederlandsch Bot. Ver., 18th May. 1871, p. 30, t. v., f. 9.

Rev. Dr. Keith. Forres. On holly twigs.

287. *Fenestella bipapillata* (Tul.), Sacc. *Valsa bipapillata*, Tul. *Carp.* II., 206. *Sacc. Syll.* p. 327.

Perithecia globose, minute black, very smooth, immersed in the bark in valsoid clusters of from 5 to 8, very slightly, or not at all rostrate, collapsing when dry; asci cylindrical, 180-200 by 16-18, very obtuse, slightly attenuated below, octosporous with very long paraphyses, sporidia uniseriate, ovate, lanceolate, with a pallid papilla at both ends,  $32-40 \times 15-18$ , triseptate muriform.

On beech. Rev. Dr. Keith. Sp.  $30 \times 15$ ; asci  $150-200 \times 15-18$ .

288. *Ophiobolus vulgaris*, Sacc. *Mich.* II., p. 953. *Syll.* II., p. 338. *Rhaphidophora vulgaris*, Sacc. *Mich.* II., p. 67.

Perithecia not seated upon discoloured spots of the matrix, innate, then erumpent, globose, conical,  $\frac{1}{8}-\frac{1}{4}$  mill. in diameter; asci cylindrical,  $90-120 \times 6-8$  mill., sessile without paraphyses, octosporous; sporidia filiform,  $80-100 \times 1-1\frac{1}{2}$ , uniform in diameter, multinucleate pale yellow.

On dead potato stalks. Stirling, N.B. Mr. A. Croall.

This differs from *O. porphyrogonus* (Tode), (*Sphaeria rubella*, Pers.) in the smaller size of its fruit, and in the mycelium not producing purple or red discolouration of the matrix.

289. *Eleutheromyces longispora*, N. sp.

Perithecia crowded, superficial, elongated, whitish-yellow, 450 to 500 mill. high by 200 mill. wide at the base; ostiola acutely pointed; asci clavato-elongate or subfusiform,  $130-150 \times 20-25$ , usually tetrasporous; sporidia hyaline, elongate fusiform, acute, uniseptate, with terminal cilia at both extremities,  $50-60 \times 5-8$  mill.

On the remains of some *Myxogaster*. Holt House Woods, King's Lynn. 4th Sept., 1882.

The acute ostiola are composed of a number of converging narrow straight cells placed side by side.

290. *Nectria fibricola*, Plow. Sacc. *Mich.* II., p. 152.

Perithecia scattered, globoso-conoid, pale, yellowish-red, 200 mill. wide 400 mill. high, ostiola obtusely conical, walls of perithecia thin, and parenchymatous; asci clavate,  $90 \times 20-25$ , octosporous: sporidia, biseriata oblong,  $20 \times 8-8\frac{1}{2}$ , uniseptate, slightly constricted, obtuse at both ends, 4 nucleate, hyaline, abnormally triseptate.

On rotting string. King's Lynn. 1881.

291. *Nectria dacrymycella* (Nyl.), Karst.

Perithecia, when young, immersed, afterwards naked, hemispherical, prominent, apex slightly depressed, subtremelloid,

orange yellow, minute, about 2 mill. wide, or slightly more, smooth; asci fusoid,  $70-80 \times 10-11$ , octosporous; paraphyses branched; sporidia fusiform, finely uniseptate, hyaline,  $16-18 \times 3$  to 4 mill. Karst. Myc. Fenn. ii., p. 216. *Sphæria* N. Flora 1863, p. 322.

On *Angelica* stems. Blaize Castle. Mr. C. Bucknall.

292. *Hypocrea argillacea*, N. sp.

Pulvinate, clay-coloured, rather thin, 1 to 3 mill. in diameter; perithecia rather large, darker, prominent, pale brown; ostiola minute, prominent; asci cylindrical, octosporous,  $60-70 \times 8$ ; sporidia separating into 16, subglobose hyaline, generally rather longer than wide,  $4-5 \times 4$ .

On soft rotten wood, apparently ash. Dersingham. 1 Nov., 1881.

293. *Hypocrea strobilina*, N. sp.

Discoid, stroma whitish, thin, 1 to 4 mill. across; perithecia yellowish (honey-coloured), rather large; asci cylindrical; octosporous; sporidia separating into two halves, each of which is subglobose; hyaline  $5-6 \times 5-5\frac{1}{2}$  mill.

On cones of spruce fir. Belmont. Hereford. Nov., 1878. Mr. James Renny.

The hyaline sporidia are unusually large.

294. *Hypocrea splendens*, N. sp.

Subglobose, then expanded, golden-yellow, then reddish-orange, when old with a tinge of brown, fleshy, thick, hemispherical, then convex, bearing perithecia on the whole of the upper surface, 3 to 6 mill. across; flesh yellowish-white, firm; perithecia minute, darker; asci cylindrical, octosporous,  $80-90 \times 5-6$ ; sporidia hyaline, separating into two parts, each of which is globose; nucleate  $4\frac{1}{2}-5$  mill. in diameter.

On laurel sticks. Leicestershire. Mr. T. Howse. Oct., 1881.

295. *Hypocrea viscidula*, N. sp.

Stroma at first globose, flattened above, then discoid, becoming cupulate, 5 to 10 mill. across; margin thin, at length repand and revolute, at first straw-coloured, viscid, shining, flesh firm, whitish, becoming yellow; disc dotted with dark green perithecia; asci cylindrical, octosporous,  $130-150 \times 10-11$ ; sporidia olivaceous green, soon separating into two parts, each of which is subglobose; nucleate dark green, 6-8 mill. in diameter.

On wood and bark of *Pinus sylvestris*. Brandon. 7th Nov., 1881.

A well marked species of large size, and characterised by the large size of its olivaceous sporidia.

296. *Lophodermum caricinum* (Desm. & Rob.), Duby Hyst. p. 47.

*Hysterium caricinum*, Robin Herb. Desm. 14, Nat. 1847, p. 180. Sacc. Syll. p. 797.

On pallid, withered spots, covered by the epidermis, scattered, oval, either slightly acute or obtuse at both ends, flat, black; opaque, minutely tuberculate, at length opening with a pallid disc, lips thin; asci clavate, 60-70, mk. bacillaro-filiform,  $50 \times 1$  mk.

On *Carex arenaria*. Mintlynn. 30 Aug., 1884.



## PRÆCURSORES AD MONOGRAPHIA POLYPORORUM.

By M. C. COOKE.

We have often been solicited to undertake a revision of the genus *Polyporus* of Fries, with critical notes. For two years we have cherished the hope of seeing this accomplished, and done something to facilitate it, but so many other, and pressing, claims upon our attention have from time to time postponed the attempt. At length we have resolved upon issuing our preliminary lists, imperfect though they may be, in order to indicate the arrangement we have decided to adopt. It will be seen that the method is based upon the suggestions of Fries in his "*Novæ Symbolæ*" (1851), with a few unimportant modifications.

Our present intention is to publish, in a collected form, all the scattered descriptions of the species known, with measurements of the pores, &c., and such critical notes as we can furnish, of the species described by Fries, Berkeley, Leveille, Montagne, ourselves, and others, as derived from authentic specimens. Meanwhile the preliminary lists may be of service, although they must not be accepted as absolute, either as to the sequence of species or the specific value of every name. As we are anxious to examine for ourselves every species possible, progress is necessarily slow. We desire, above all things, to make the work practically useful, therefore any suggestions of omitted species will receive grateful consideration.

**POLYPORUS (Eupolyporus), Fries.**

Pileus carnosus lentus, dein induratus (raro e caseoso-floccoso fragilis) extus absque sulcis et zonis, sed contextus radians fibrosus (intus) saepe zonatus. Pori numquam stratosi.

A. **Ovini.** Mesopodes, carnosi, terrestres.

\* *Pileo imposito, squamoso floccosove.*

- 1 tessulatus, *Fr. Hym. Eur.* 523.
- 2 tuberaster, *Fr. Hym. Eur.* 523.
- 3 subsquamosus, *Fr. Hym. Eur.* 523.
- 4 nodipes, *Berk. Hook. Journ.* 1852, 136.
- 5 ovinus, *Fr. Hym. Eur.* 523.
- 6 flavo-virens, *B. & Rav. Grev.* i. 38.
- 7 Ellisii, *Berk. Grev.* vii. p. 5.
- 8 leucomelas, *Fr. Hym. Eur.* 523.
- 9 pescaprae, *Pers. Champ. Com.* t. 5.  
v. scobinaceus, *Pers. Myc. Eur.* ii. 37.
- 10 asprellus, *Lev. Comm.* 14.
- 11 hydniceps, *B. & C. Cubensis* No. 191.
- 12 radicans, *Schwein. Amer. Bor.* 331.
- 13 Hartmanni, *Cooke Grev.* xii. 14.
- 14 caeruleoporus, *Peck.* 26 Report 68.
- 15 olivaceo-fuscus, *B. & Br. Linn. Journ.* xiv. 46.
- 16 persicinus, *B. & Curt. Grev.* i. 39.
- 17 myclodes, *Kalch. Grev.* iv. 73.

\*\* *Pileo glabro.*

- 18 viscosus, *Pers. Myc. Eur.* ii. 41.
- 19 xoilopus, *Rost. Poly.* t. 10.
- 20 virellus, *Fr. Hym. Eur.* 525.
- 21 politus, *Fr. Hym. Eur.* 525.
- 22 poripes, *Fr. Novæ. Symb.* 32.
- 23 rutrosus, *Rost. Poly.* t. 22.
- 24 fuliginus, *Fr. Hym. Eur.* 525.
- 25 Campbelli, *Berk. Hook. Journ.* 1854, 228.
- 26 nanus, *Mont. Syll.* 153.
- 27 griseus, *Peck. 26 Report* 68.
- 28 popanoides, *Cooke Grev.* ix. 97.

B. **Lenti.** Mesopodes e carnosio lenti, indurato, epixylo. Stipitis basi concolori, nec nigra. *Mesopus, lentus*, *Fr. Epic.* 11-20.

\* *Pileo impolito, squamoso villosove.*

- 29 lepidus, *Fr. Hym. Eur.* 526.
- 30 lentus, *Berk. Outl.* p. 237.
- 31 brumalis, *Fr. Hym. Eur.* 526.  
var. floccopus, *Rost. Poly.* t. 13.
- 32 callochrous, *Lev. Ann. Sci. Nat.* 1844, 181.
- 33 Weddellii, *Mont. Ann. Sci. Nat.* v. 366.
- 34 scabriceps, *B. & C. Fungi Cub.* No. 190.
- 35 penetralis, *Smith Journ. Bot.* 1875, 98.
- 36 fractipes, *B. & Curt. Grev.* i. 39.
- 37 maculatus, *Berk. Hook Journ.* 1851, 80.
- 38 dibaphus, *B. & Curt. Grev.* i. 36.
- 39 luridus, *B. & Curt. Grev.* i. 39.
- 40 delicatus, *B. & Curt. Grev.* i. 39.
- 41 orbicularis, *Sauter Hedw.* xv. 150.  
(*rhypidium*, *Berk. Lond. Jour.* 1847, 319=*Favolus*.)
- 42 tubarius, *Quelet. Bull. Soc. Bot. Fr.* 1878, 289.

\*\* *Pileo strigoso virgatove.*

- 43 vernalis, *Fr. Hym. Eur.* 527.
- 44 virgatus, *B. & Curt. Linn. Journ.* x. 304.

\* \* *Pileo cupulæformi.*

- 45 pocula (Schw.), *B. & Curt. Proc. Am. Ac.* iv. 122.
- 46 cupulæformis, *B. & Curt. Grev.* i. 38.

\*\* *Pileo margine ciliato.*

- 47 arcularius, *Fr. Hym. Eur.* 526.  
= *P. agariceus*, *König.*
- 48 æmulans, *B. & Curt. Fungi Cub.* 181.
- 49 ciliatus, *Fr. Hym. Eur.* 527.
- 50 umbilicatus, *Berk. Hook. Journ.* 1851, 79.
- 51 tricholoma, *Mont. Syll.* 153.
- 52 rubripes, *Rostk. Poly.* t. 16.
- 53 similis, *Berk. Hook Journ.* 1843, 635.
- 54 Binnendykei, *Kurz. in Herb. Berk.* 2279.
- 55 flexipes, *Fr. Linn.* v. 515.  
= *apalus*, *Berk. Hook. Journ.* 1843, 635.  
= *gracilis*, *Klot. Ann. Nat. Hist.* 1839.

\*\* *Pileo glabro.*  
\*\*\*

- 56 alveolarius, *Fr. Epicr.* 431.  
     =*collybioides*, *Kalch. Grev.* x. 94.  
 57 incendarius, *Fr. Hym. Eur.* 527.  
 58 corylinus, *Vivian Ital.* t. 1.  
 59 tiliae (*Schulz*), *Fr. Hym. Eur.* 528.  
 60 fuscidulus, *Schrad. Spic.* 153.  
 61 leptocephalus, *Fr. Hym. Eur.* 528.  
 62 cremoricolor, *Berk. Hook. Journ.* 1851, 79.  
 63 columbiensis, *Berk. Hook. Journ.* 1842, 454.  
 64 stipitarius, *B. & Curt. Fungi Cub.* No. 183.  
     *var. Armitii, Muell & Kalch. Grev.* x. 94.  
 65 humilis, *Peck 26th Report* 69.  
 66 pachypus, *Mont. Syll.* 154.  
 67 cyathiformis, *Lev. Ann. Sci. Nat.* 1848, 181.  
 68 trachypus, *Mont. Syll.* 154.  
 69 phæoxanthus, *Mont. Syll.* 154.  
 70 acicula, *B. & Curt. Fungi Cub.* 184.  
 71 tuba, *B. & Curt. Fungi Cub.* 189.  
 72 discoideus, *B. & Curt. Fungi Cub.* 187.  
 73 craterellus, *B. & Curt. Fungi Cub.* 188.  
 74 pisiformis, *Kalch. Grev.* x. 98.

(*P. favularis. Fr. Nov. Sym.* 34=*Favolus.*)

C. **Spongiosa.** Pileus primo spongioso-mollis, aquum bibulus, tomentosus, dein suberosus coriaceusve. Stipes curtus difformis. Pori difformis, pruina irrorati, decolorantes. *Fr. Hym. Eur.* 528.

\* *Contextu fusco.*

- 75 maximus, *Fr. Hym. Eur.* 529.  
 76 Schweinitzii, *Fr. Syst. Myc.* i. 351.  
     *var. tabulæformis, Berk. Hook. Journ.* 1845, 302.  
     (=*spectabilis, Fr. Novæ. Symb.* 32.)  
 77 endocrocinus, *Berk. Hook. Journ.* 1847, 320.  
 78 ? glomeratus, *Peck. 24th Report* 78.  
 79 vallatus, *Berk. Hook. Journ.* (1852) 188.

\*\* *Contextu albido.*

- 80 biennis, *Fr. Hym. Eur.* 529.  
 81 sericellus, *Sacc. Myc. Ven.* 818.  
 82 rufescens, *Fr. Syst. Myc.* i. 351.  
     *var. abortivus, Peck.*  
 83 heteroporus, *Fr. Hym. Eur.* 543.  
 84 laciniatus, *Pers. Myc. Eur.* ii. 48.  
 85 anthelminticus, *Berk. Gard. Chron.* 1866, p. 753.  
 86 proteiporus, *Cooke Grev.* xii. 15.

D. **Melanopodes.** Meso-aut sæpius pleuropodes. Stipite toto aut basi nigricante. Pileo e carnosio lento induratoque.

\* *Pileo squamoso floccosove.*

- 87 squamosus, *Fr. Sys. Myc.* i. 343.  
     (*Boucheanus, Klotsch Linn.* viii. 318=*Favolus.*)

- 88 *Michelii*, *Fr. Sys. Myc.* i. 343.  
 89 *pallidus*, *Schulz. in Fr. Hym. Eur.* 538.  
 90 *melanopus*, *Fr. Sys. Myc.* i. 347.  
     *var. cyathoides*, *Swartz.*  
     *var. leprodes*, *Rostk. Poly. t.* 15.  
 91 *versiformis*, *Berk. Hook. Journ.* 1852, 137.  
 92 *Trogii*, *Fr. Nova Symb.* 34.  
     (*Philippinensis*, *Berk. Hook. Journ.* 1842, 148=*Favolus*.)  
     \*\* *Pileo glabrato.*  
 93 *Rostkovii*, *Fr. Hym. Eur.* 534.  
 94 *glutinifer*, *Berk. in Herb.*  
 95 *typyporus*, *Berk. in Hook. Journ.* 1851, p. 81.  
 96 *infernalis*, *Berk. Hook. Journ.* 1843, 637.  
 97 *picipes*, *Fr. Syst. Myc.* i. 353.  
 98 *fissus*, *Berk. Hook. Journ.* 1847, 318.  
 99 *varius*, *Fr. Syst. Myc.* i. 352.  
 100 *semi-nigrita*, *B. & Cooke, Linn. Journ.* xv. 377.  
 101 *elegans*, *Bull. Champ. t.* 46.  
     *var. nummularius*, *Bull. t.* 124.  
     *var. minimus*, *Fr. Hym. Eur.* 536.  
 102 *hemicapnodes*, *B. & Br. Linn. Journ.* xiv. 47.  
     *var. dimorphus*, *Cke. Grev. xiii.* 1.  
 103 *guianensis*, *Mont. Syll.* 153.  
 104 *glabratus*, *Kalch. Hedwigia* xv. 114.  
 105 *alpinus*, *Sauter Hedwigia* 1876, 33.  
 106 *Guillfoylei*, *B. & Br. Linn. Trans.* ii. p.  
     =*nonscriptus*, *Berk. in Herb.*  
 107 *Gayanus*, *Lev. Ann. Sci. Nat.* 1846, 127.  
 108 *Leprieurii*, *Mont. Syll.* 155.  
 109 *Blanchettianus*, *Mont. Syll.* 155.  
 110 *vernicosus*, *Berk. Hook. Journ.* 1856, 175.  
 111 *atratus*, *Fr. Nova. Symb.* 124.  
 112 *dictyopus*, *Mont. Syll.* 155.

**E. *Petaloides.*** Pileus e carnosus lentus, exacte lateralis (postice non marginatus). Stipite toto pallido, vulgo brevissimo, basi scutata lignis putridis adnato, in linea recta cum pileo, priorum more, vulgo striato-vergato ut in omnibus vicinis azonis. *Fr. Nova Symb.*

\* *Pileo glabrato.*

- 113 *tephromelas*, *Mont. Syll.* 155.  
 114 *tristiculus*, *Mont. Ann. Sci. Nat.* 1854, 129.  
 115 *peltatus*, *Fr. Nova. Symb.* 36.  
 116 *dendriticus*, *Fr. Nova. Symb.* 37.  
 117 *putidus*, *Fr. Nova. Symb.* 35.  
 118 *vibecinus*, *Fr. Fungi Natal* 6.  
     *var. antilopum*, *Kalch. in Grev.*  
 119 *vera-crucis*, *Berk. in Herb.* No. 2429.  
 120 *petaloides*, *Fr. Epicr.* 444.  
 121 *liturarius*, *B. & Curt. Sill. Journ.* xi. (1851) 94.  
 122 *annularis*, *Fr. Nova Symb.* 36.

- 123 anisoporus, *Mont. Syll.* 156.  
 124 trigonus, *Lev. Ann. Sci. Nat.* 1846, 125.  
 125 udus, *Jungh. in Hav. Tids.* vii. 285.  
 126 miniatus, *Jungh. Java* 65.  
 127 sanguineus, *Fr. Epicr.* 444.  
 128 obovatus, *Jungh. Jav.* 68.  
 129 phlebophorus, *Berk. Fl. N. Zeal.* ii. 177.  
 130 decolor, *Berk. Hook. Journ.* 1856, 195.  
 131 lenzitoides, *Berk. in Videns Medd. Kjob.* 1879, 34.

\*\* *Pileo subsquamoso vel floccoso.*

- 132 grammocephalus, *Berk. Lond. Journ.* i. 147.  
     - *Muelleri*, *Kalch. Grev.* x. t. 145.  
     var. *Emerici*, *Berk. Grev.* x. 96.  
     var. *russiceps*, *B. & Br. Ceylon Fungi* 449.  
 133 platotus, *B. & Br. Linn. Trans.* ser. 2. ii. 401.  
 134 dorcadideus, *B. & Br. Linn. Trans.* ii. 401.  
 135 fusco-lineatus, *B. & Br. Linn. Trans.* ii. 401.  
 136 ligoniformis, *Ben. Hedw.* xv. 76.  
 137 Dickinsii, *Berk. Linn. Journ.* xvi. 50.  
 138 terebrans, *B. & Curt. Linn. Journ.* x. 306.

**F. Frondosi.** Pileus carnosus, firmus, floccoso-fibrosus, *azonus*, nec coriaceo-induratus. Cæspites centrales, stipitati, e basi communi enati, plus minus concreti, ut in macris formis pileum centram simplicem lobatum, subinde referant. Pori secedentes.

- 139 Barrelieri, *Viviani Ital.* 28, t. 36.  
 140 umbellatus, *Fr. Epicr.* 446.  
 141 frondosus, *Fr. Epicr.* 446.  
 142 Colensoi, *Berk. Fl. N. Zeal.* ii. 178.  
 143 intybaceus, *Fr. Epicr.* 446.  
 144 cristatus, *Fr. Epicr.* 447.  
 145 confluent, *Fr. Epicr.* 447.  
 146 amygdalinus, *Berk. & Rav. Grev.* i. 49.  
 147 subgiganteus, *B. & Curt. Grev.* i. 49.  
 148 Beatiei, *Banning 31st Report N.Y. Mus.*  
 149 anax, *Berk. Grev.* xii. 37.  
 150 botryoides, *Lev. Ann. Sci. Nat.* 1846, 128.  
 151 rubricus, *Berk. Hook. Journ.* 1851; 81.  
 152. eurocephalus, *B. & Br. Ceylon Fungi* No. 451.

**G. Lobati.** Pileo e carnosus lento sub-coriaceo, plus minus *zonato*, intus fibroso. Pori adnati. Cæspites laterales substipitati imbricato-multiplices, stipitibus plus minus connatus vel e tubere communi enatis.

- 153 giganteus, *Fr. Epicr.* 448.  
 154 Berkeleyi, *Fr. Nova. Symb.* 40.  
 155 acanthoides, *Bull. Champ.* t. 486.  
 156 lobatus, *Gmel. Fr. Epicr.* 448.  
 157 Pauletii, *Fr. Epicr.* 449.  
 158 distortus, *Schwein. Syn. Car.* 903.  
 159 candidus, *Fr. Epicr.* 449.  
 160 osseus, *Kalch. Enum.* t. 160.

- 161 floriformis, *Quel. in Bresadola Fungi Trid.*
- 162 secernibilis, *Berk. Hook. Journ.* 1847, 500.
- 163 armoracius, *Berk. in Fr. Nova. Symb.* 37.
- 164 trichrous, *Berk. & Curt.* (nomen nudus).
- 165 anthracophilus, *Cooke Grev.* xii. 16.
- 166 Glaziovii, *Berk. Vid. Medd. Kjob.* 1879, 34.
- 167 Warmingii, *Berk. Vid. Medd. Kjob.* 1879, 32.

\*\* *Contextu læte colorato.*

- 168 flammans, *Berk. Hook. Journ.* 1852, 139.
- 169 lætus, *Cooke Grev.* xii. 16.

**H. Imbricati.** Pileo epelliculoso, caseoso, primo succoso-molli, dein arido fragili azono, poris secedentibus. Cæspites ad caudices arborum sessiles, vulgo dimidiato in situ vero horizontali undique expansi centrales, primitus ex unico tuberculo amorpho in pileolos innumeros explicati.

- 170 casearius, *Fr. Epic.* 449.
- 171 sulphureus, *Fr. Epic.* 450.  
var. ceratoniae, *Fr. Hym. Eur.* 552.
- 172 retiporus, *Cooke Grev.* xii. 15.
- 173 discolor, *Klotsch. Linn.* viii. 483.
- 174 Telfairii, *Klotsch. Linn.* viii. 483.
- 175 imbricatus, *Fr. Epic.* 450.
- 176 alligatus, *Fr. Epic.* 450.
- 177 sordulentus, *Mont. Syll.* 160.

**I. Mollis.** Anodermei, pileo caseoso, primo aquose mollis fragili, flocculoso nec, ob contextum (album) tenuiorem, setoso-hispido, poris subsecedentibus albis. Adultiores nunc mollis nunc indurato, sed brevi putrescunt nec per hiemem persistunt.

\* *Pileo tomentoso.*

- 178 lacteus, *Fr. Hym. Eur.* 546.  
=saccharinus, *B. & C. in Herb.*
- 179 leucomallus, *B. & C. Fungi Cub.* 214.
- 180 tephronotus, *Berk. Fl. Tasm.* ii. 252.
- 181 tephroleucus, *Fr. Hym. Eur.* 545.
- 182 sordidus, *Cke. Grev.* xiii. ined.
- 183 epileucus, *Fr. Hym. Eur.* 545.
- 184 armeniacus, *Berk. Hook. Journ.* 1856, 197.
- 185 alutaceus, *Fr. Hym. Eur.* 545.
- 186 testaceus, *Fr. Hym. Eur.* 545.
- 187 undosus, *Peck. 34th Report* p. 42.
- 188 corivalis, *Berk. Linn. Journ.* xiii. 162.
- 189 molliusculus, *Berk. Hook. Journ.* 1847, 320.
- 190 Keithii, *B. & Br. Ann. Nat. Hist.* No. 1,430.
- 191 verecundus, *B. & C. Fungi. Cub.* 220.
- 192 appendiculatus, *B. & Br. Ceylon Fungi* 453.
- 193 ostreæformis, *Berk. Linn. Journ.* xvi. 46.
- 194 semi-digitaliformis, *Berk. Linn. Jour.* xvi. 89.
- 195 Gunnii, *Berk. Fl. Tasm.* 253.

- 196 angustus, *Berk. Fl. Tasm.* 253.  
 197 corium, *Berk. Hook. Journ.* 1852, 163.

**\*\* Pileo glabro.**

- 198 fragilis, *Fr. Hym. Eur.* 546.  
 199 nitidulus, *B. & C. Amer. Acad.* iv. 122.  
 200 versicutis, *B. & C. Fungi Cub.* 215.  
 201 albogilvus, *B. & C. Fungi Cub.* 216.  
 202 trabeus, *Rostk. Poly.* t. 28.  
 203 Kerensis, *Pass. Nuovo. Giorn. Ital.*  
 204 cæsius, (*Schr.*) *Fr. Hym. Eur.* 547.  
 205 mollis, *Fr. Hym. Eur.* 547.  
 206 fimbriporus, *Schwein. Amer. Bor.* 355.  
 207 obductus *Berk. Hook. Journ.* 1845, 304.  
 208 stipticus, *Fr. Hym. Eur.* 546.  
 209 chioneus, *Fr. Hym. Eur.* 546.  
 210 pallescens, *Fr. Hym. Eur.* 546.  
 211 destructor, *Fr. Hym. Eur.* 547.  
     *var. undulatus, Fr. Hym. Eur.* 547.  
 212 trichocoma, *Fr. Novæ. Symb.* 37.  
 213 microscopicus, *Jungh. Fl. Java.* i. 52.  
 214 semi-supinus, *B. & C. Grev.* x. 50.  
 215 semi-pileatus, *Peck. 34th Report* 43.  
 216 microstomus, *B. & C. Cuban Fungi* 218.  
 217 evolutus, *B. & C. Cuban Fungi* 217.  
 218 cerifluus, *B. & C. Grev.* i. 50.  
 219 campylus, *Berk. Fl. Tasm.* ii. 252.  
 220 pulchellus, *Sacc. Myc. Ven.* 50.  
 221 argentatus, *Cooke Grev.* xiii. *ined.*  
 222 comtulus, *Berk. (Fr. Nova. Sym.* 81).

**L. Dichroi.** Anodermei. Pileo carnosus lento (etiam juniorum tenaci) molli, elastico, ob contextum fibroso-floccosum villosotomentoso, poris subadnatis coloratis. Semper molles subflexiles.  
 = *Anodermei lenti.* *Fr. Ep.*

**\* Contextu colorato.**

- 223 simulans, *B. & Curt. Herb.* 2,543.  
 224 croceus, *Pers. Myc. Eur.* ii. 59.  
 225 Spraguei, *B. & C. Grev.* i. 50.  
 226 dialeptus, *Fr. Ep.* 456.  
 227 aesculi, *Schwein. in Fri. Epic.* 454.  
 228 læticolor, *Berk. Linn. Journ.* xvi. 46.  
 229 nidulans, *Fr. Hym. Eur.* 548.  
 230 endozonus, *Fr. Nova. Symb.* 38.  
 231 dryophilus, *Berk. Hook. Journ.* 1847, 321.  
 232 rutilans, *Pers. Ic. et Desc.* t. 6, f. 4.  
 233 cæruleus, *Schum. Saell.* 387.  
 234 fœdatus, *Berk. Linn. Journ.* xvi. 41.  
 235 rubidus, *Berk. Hook. Journ.* 1847, 500.  
 236 Beckleri, *Berk. Linn. Journ.* x. 162.  
 237 pallido-cervinus, *Schwein. Amer. Bor.* 371.  
 238 calvescens, *Berk. Ann. Nat. Hist.* 1839 390.

- 239 *gilvus*, Schw. Syn. Car. 897.  
 240 *scruposus*, Fr. *Epicr.* 473.  
     = *var. isidioides*, Berk. *Hook. Journ.* 1843, 515.  
         \*\* *Contextu albo.*
- 241 *albus*, Huds. *Fl. Ang.* 626.  
 242 *scanicus*, Fr. *Hym. Eur.* 549.  
 243 *abruptus*, Berk. *Linn. Journ.* xvi. 42.  
 244 *fumosus*, Fr. *Hym. Eur.* 549.  
 245 *Lindheimeri*, B. & Curt. *Grev.* i. 50.  
 246 *digitalis*, Berk. *Hook. Journ.* 1852, 139.  
 247 *demissus*, Berk. *Hook. Journ.* 1845, 52.  
 248 *rhinocephalus*, Berk. *Fl. Tasm.* ii. 253.  
 249 *diffusus*, Fr. *Nova. Symb.* 39.  
 250 *fragrans*, Peck 30th Report 45.  
 251 *Curreyanus*, Berk. in *Herb.* 2,820.  
 252 *dissitus*, B. & Br. *Ceylon Fungi* No. 454.  
 253 *adustus*, Fr. *Hym. Eur.* 549.  
     *var. resupinatus* (= *fumoso-griseus*, C. & E.).  
 254 *crispus*, Fr. *Hym. Eur.* 550.  
 255 *kymatodes*, Rostk. *Poly.* t. 24.  
 256 *intercalaris*, B. & Cooke *Linn. Journ.* xv. 380.  
 257 *hypo-citrinus*, Berk. *Linn. Journ.* xv. 50.  
 258 *candidulus*, Lev. *Ann. Sci. Nat.* 1846, 301.  
 259 *dichrous*, Fr. *Hym. Eur.* 550.  
     = *Gleoporus conchoides*, Mont.  
     *var. nigro purpurascens*, Schw. *Am. Bor.* 360.  
     *var. isabellinus*, Schwein. *Am. Bor.* 899.  
     *var. Macowani*, Kalchb. *Grev.* x. 54.
- 260 *amorphus*, Fr. *Hym. Eur.* 550.  
     *var. irregularis*, Sow. t. 423.  
     *var. roseoporis*, Rostk. t. 12.  
     *var. Halesiæ*, B. & C. *Grev.* i. 52.
- 261 *adiposus*, B. & Br. *Fr. Hym. Eur.* 550.  
     *var. armeniacus*, Berk. *Eng. Fl.* v. 147.

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(Continued from p. 61.)

**Agaricus frumentaceus**, Bull. Cooke Illus. t. 470.

The plate issued in "Illustrations" was copied from a drawing made by Mr. Worthington Smith from specimens sent to him from Forbes by the Rev. Dr. Keith. Never having been so fortunate as to see this species, we accepted the designation attached to the drawing, and published it as an *Entoloma*, under the impression that it was the *Agaricus (Entoloma) frumentaceus*, Berk. & Br. Dr. Keith has kindly drawn our attention to this figure, at the same time stating his conviction that the original specimens were those of an undoubted *Tricholoma*, the pink tinge of the spores being faint and quite of a different character to the spores in *Hyporhodii*. Whatever, therefore, the plant of Berkeley and Broome may be, to which they attach the name of *frumentaceus*, and include in the subgenus *Entoloma*, it cannot be the species figured as above, since Dr. Keith must have had ample material to judge, and no one would doubt his ability to form an authoritative opinion. Plate 470 must, therefore, be corrected to *Ag. (Tricholoma) frumentaceus*, Bull. We may add that the majority of Continental mycologists contend that Bulliard's species is a *Tricholoma*, and both the size and form of the spores given in our plate certainly are more in accordance with those usually found in *Tricholoma* than those of *Entoloma*.

**Agaricus (Pluteus) semibulbosus**, Fr. Hym Eur. 188.

Small. Pileus rather fleshy, hemispherical, obtuse, *atomate*, soft, *sulcate*, white; stem delicately fistulose, *pubescent*, *inflated* in a *bullate* manner *at the base*; gills free, whitish, then flesh-coloured.—Cooke Illus. t. 518, fig. a.

On wood. Scarboro'. (*G. Massee*.)

Pileus about half an inch broad, deeply *sulcate*. Stem about an inch long.

**Agaricus (Pluteus) violarius**, Massee, *in litt.*

Pileus hemispherical, then nearly plane, velvety, even, watery dark purple, disc darkest, margin undulate. Flesh thick, grey;

stem thickest at the base and pale umber, attenuated upwards and whitish, silky, fistulose, sprinkled below with delicate black fibrils, gills crowded, margin serrulate, whitish then brightish flesh-colour.—*Cooke Illus. t. 518, fig. b.*

On a stump. Scarboro'. (*G. Massee.*)

Gregarious. Pileus  $\frac{1}{2}$ – $1\frac{1}{4}$  inch. Stem 1 in. long, 1 line thick at the apex. Smell none. Taste pleasant. Spores spherical, smooth. Paper in which the specimens were dried stained bright violet.

**Agaricus (Pluteus) ephebius**, *Fr. Hym. Eur.* 186.

Pileus fleshy, convex then flattened, obtuse, clad with a bluish tomentum, margin naked; stem stuffed, smooth, minutely striate; gills free, yellowish, then flesh-coloured.—*Cooke Illus. t. 517.*

On rotten wood. Helmsley, Yorks. (*G. Massee.*)

Pileus from 1 to 2 inches broad. Stem 1 to 2 inches long, often curved, and sometimes turning bluish.

**Agaricus (Inocybe) perbrevis**, *Weinm. Ross. p.* 185.

Pileus rather fleshy, convex, obtusely umbonate, fibrous or squamose, margin rather striate, at length cracked; stem stuffed, short, pallid, clad with white fibrils, somewhat attenuated at the base, gills uncinately adnexed, rather distant, whitish, then tawny or clay-coloured.—*Fr. Hym. Eur.* 233. *Hoffm. Ic. t. 14, f. 1. Cooke Illus. t. 519.*

In shady woods. Near Scarboro'. (*G. Massee.*)

Small but rather firm, tawny or rufous, becoming yellowish. Pileus about an inch. Stem scarcely an inch long, cortinate, pruinose at the apex. Flesh white.

**Agaricus (Psalliota) augustus**, *Fr. Hym. Eur.* 278.

Pileus globose, then hemispherical, at length expanded, very obtuse, disc even, circumference fibrillose-squamose, stem solid, thick, smooth; ring superior very broad, externally cracked into angular scales; gills crowded, narrow, pallid then brown, remote, leaving a collar round the stem.—*Fr. Sver. Svamp. t. 38. Cooke Illus. t. 521.*

In woods.

A very large and fine species. Pileus 4–5 inches broad. Stem  $1\frac{1}{2}$ –2 in. thick, attenuated upwards, white, but tinged with red when bruised. Flesh soft, white, unchangeable. Gills never acquiring a flesh-colour.

**Agaricus (Psalliota) pratensis**, *Schaff. Icon. t.* 96.

Pileus fleshy, ovoid then expanded, becoming smooth or squamulose, whitish then cinereous; stem stuffed, thickened at the base, naked; ring median simple, deciduous; gills free, narrow, acute, rounded behind, cinereous, at length brown.—*Fr. Hym. Eur.* 279. *Cooke Illus. t. 525.*

In pastures and woods. Pulborough, Sussex.

Pileus 2–3 inches broad. Stem 2 in. long, half an inch thick and more. Odour and taste pleasant.

**Agaricus (Psalliota) subgibbosus, Fr. Hym. Eur. 281.**

Pileus rather fleshy, convex then plane, umbo even, smooth, but the circumference silky, fibrillose. Stem hollow, thin, ring fugacious, gills remote, white, then cinereous brown.

In woods, &c. Pleasure grounds, Kew.

The form figured in Cooke's Illustrations, t. 532, is referred provisionally to this species, on the recommendation of the Rev. M. J. Berkeley. It is larger than the typical form. Pileus 2-3 inches. Stem 2-3 inches long, half an inch thick.

**Agaricus (Panæolus) egregius, Massee.**

Pileus ovate-campanulate, smooth, even, viscid when moist, bright orange brown, disc darker, fleshy, exceeding the gills at the margin, with a trace of agglutinated down on the pileus, virgate when dry; flesh ochraceous; stem thickened at the base, solid, fibrillose, readily splitting longitudinally, brown without and within, duller than the pileus, white and cottony at the base, smooth at the apex. Gills broad, ventricose, adnexed, crowded, thin, brownish-black, edge entire paler, dry not deliquescent, spores brown, then blackish-purple, oblong-ovate with a minute apiculus. Smell none.

On the ground, Scarboro'. (G. Massee.)

Pileus  $2\frac{1}{2}$  inches high, 2 inches broad. Stem 5 inches long, half an inch thick. Gills half an inch broad in the centre. A very remarkable species, with somewhat the habit of a *Coprinus*.

We would willingly have avoided describing the following species of incomplete fungi, except in conjunction with the ascomycetous species to which they are accredited, but, as the "Sylloge" includes their allies, as if they were autonomous, we have no other alternative. As we purpose commencing in our next issue a catalogue of the British Sphærospideæ, brought up to date, we have made no reference here to the large number of described species which have come to our knowledge since the publication of the "Handbook," as these will be contained in the proposed catalogue. Specimens of the majority have been deposited in the Herbarium of the Royal Gardens at Kew.

**Phyllosticta asiatica, Cooke.**

Spots orbicular or irregular, tawny, circumscribed by a dark purplish-brown border, which passes into crimson as it spreads into the leaf. Perithecia few, mostly on the upper surface, gregarious on the spots, very minute, black, punctiform. Sporules very small, hyaline ( $0.004 \times 0.0015$  mm.) on rather longer sporophores.

On fading leaves of *Berberis asiatica*. Kew.

**Phoma Beckhausii, Cooke.**

Perithecia subglobose, scattered, covered by the bark which is slightly elevated, very indistinct. Sporules sublancoolate, continuous, usually binucleate ( $0.008-0.01 \times 0.003$  mm.)

On branches of *Viburnum lantana*—in conjunction with *Diaporthe Beckhausii*, Nke. Dartford; Kew.

**Phoma scobina**, Cooke.

Perithecia subcutaneous, gregarious chiefly near the nodes, erumpent, cracking the cuticle, subglobose, black, depressed. Sporules fusoid, or clavate, sometimes binucleate, hyaline, on straight sporophores ( $\cdot 01\text{--}\cdot 012 \times \cdot 003\text{--}\cdot 0035$  mm.).

On slender branches of *Fraxinus excelsior*. Kew, Darent, Highgate.

Spermogones of *Diaporthe scobina*, with which it is usually associated.

**Phoma laurella**, Sacc. Syll. No. 486.

In our specimens the sporules are oblong-elliptic, rounded at the ends, and  $\cdot 012 \times \cdot 0035$  mm.

On twigs of *Laurus nobilis*. Kew.

**Phoma viniferae**, Cooke = *Phoma viticola*, Sacc. Syll. No. 463; not *Phoma viticola*, Sacc. Syll. No. 653.

Sporules  $\cdot 007 \times \cdot 004$  mm., without nuclei.

On twigs of *Vitis vinifera*. Kew.

The three species (so called) of *Phoma* on vine twigs, found in Britain, are—

**Phoma vitis**, Bon. (sp.  $\cdot 003\text{--}\cdot 0035 \times \cdot 001\text{--}\cdot 002$ ).

**Phoma viniferae**, Cke. (sp.  $\cdot 007 \times \cdot 004$  mm.).

**Phoma Cookei**, Per. (sp.  $\cdot 013 \times \cdot 0045$  mm.).

**Phoma celastrinae**, Cooke.

Gregarious or aggregated. Perithecia globose, black, covered by the cuticle, which is pierced by the punctiform shining black ostiola. Spores lanceolate, attenuated to each extremity, binucleate, hyaline ( $\cdot 013 \times \cdot 005$  mm.) at first stipitate.

On small branches of *Euonymus americanus*. Kew.

**Phoma Forsythiae**, Cooke.

Very loosely gregarious. Perithecia punctiform, subglobose, immersed in the bark, which is slightly elevated, and at length pierced by the minute ostiola. Sporules elliptical, minute, enucleate, hyaline ( $\cdot 005 \times \cdot 002$  mm.) on short sporophores.

On twigs of *Forsythia*. Kew, March, 1885.

**Phoma prunorum**, Cooke.

Densely gregarious at the extremities of the small twigs, covered by the elevated but not discoloured bark, which at length becomes split in a narrow longitudinal fissure. Perithecia subglobose, black, of medium size. Sporules broadly lanceolate, attenuated towards each extremity, binucleate, hyaline ( $\cdot 01 \times \cdot 0045$  mm.).

On dead twigs of *Prunus lauro-cerasus*. Kew, March.

**Phoma radicans**, Cooke.

Caulicolous. Perithecia gregarious on bleached spots, minute, punctiform, flattened, covered by the thin cuticle. Sporules numerous, oval, hyaline, with no distinct sporophores ( $\cdot 003 \times \cdot 0015$  mm.).

On still living branches of *Tecoma radicans*. Kew.

**Phoma pruni-lusitanicæ, Cooke.**

Gregarious. Perithecia subglobose, collected about the extremities of slender twigs, elevating but scarce discolouring the cuticle, which is pierced by the minute ostiola. Sporules fusiform, binucleate, hyaline ( $\cdot 01 \times \cdot 004$  mm.).

On twigs of *Prunus lusitanica*. Kew.

**Phoma Herminieræ, Cooke.**

Perithecia small, densely gregarious, nestling in the bark, and at first covered with the cuticle, which is soon split in a stellate manner, exposing the black depressed perithecia. Sporules lanceolate, binucleate, hyaline ( $\cdot 01 \times \cdot 0035$  mm.), sporophores simple or furcate, elongated ( $\cdot 04$  mm.) thin.

On bark of *Herminiera elaphrozylon*. Grown at Kew.

**Phoma platanoidis, Cooke.**

Perithecia subcutaneous, erumpent, gregarious, splitting the epidermis so that the twigs are rough, like a rasp. Sporules fusiform, rather acute, binucleate, hyaline ( $\cdot 007\text{--}\cdot 008 \times \cdot 003$  mm.) on straight sporophores, which are twice the length of the sporules, or more.

On slender twigs of *Acer pseudoplatanus*. Kew.

In company with *Calospora platanoidis*, of which probably the spermogonia.

**Phoma Philadelphæ, Cooke.**

Perithecia rather small, generally gregarious in lines, covered by the cuticle which is scarcely elevated, immersed in the bark, depressed, black, pierced. Sporules cylindrical, obtuse at the ends, not nucleate ( $\cdot 012 \times \cdot 0025$  mm.) hyaline.

On stems of *Philadelphus*. Kew.

Distinct in habit and fruit from *P. Landeghemiae*, which occurs on smaller branchlets.

**Phoma rhododendri, Cooke.**

Sub-gregarious, on small dead twigs which are bleached, small, covered by the cuticle which is elevated, but scarcely discoloured. Perithecia subglobose, black. Sporules minute, oval, hyaline, without nuclei ( $\cdot 004\text{--}\cdot 005 \times \cdot 002$  mm.).

On twigs of *Rhododendron*. Kew.

**Phoma amelanchieris, Cooke.**

Sub-gregarious, corticolous. Perithecia immersed in the bark, elevating and cracking the cuticle, globose, black, of medium size. Sporules subfusiform, obtuse, binucleate ( $\cdot 008 \times \cdot 0025\text{--}\cdot 003$  mm.), on thin curved sporophores which are three times as long.

On *Amelanchier* branches. Kew.

**Phoma dispersa, Cooke.**

Hypophyllous. Perithecia scattered, rather large, subglobose, erumpent then subsuperficial, black, opaque. Sporules elliptical, continuous, hyaline, without nuclei ( $\cdot 015 \times \cdot 006$  mm.).

On fallen leaves of *Platanus*. Kew.

**Phoma collabens**, Cooke.

Epiphyllous. Perithecia scattered over brown spots of dead tissue on living leaves, orbicular, shining, rugose, soon depressed, sub-superficial ( $\frac{1}{4}$  mm. diam.). Sporules elliptical, continuous, hyaline, enucleate ( $\cdot 015\text{--}\cdot 018 \times \cdot 005$  mm.), sporophores not distinguished.

On living leaves of *Prunus lusitanica*. Kew.

**Phoma Lycopersici**, Cooke (Phoma herbarum, Cooke Fungi Britt. II., 415).

Caulicolous. Perithecia punctiform, black, densely gregarious, at first covered by the cuticle, ultimately more or less exposed. Sporules lanceolate, binucleate ( $\cdot 012 \times \cdot 004$  mm.).

On stems of tomato. Forden. (Rev. J. E. Vize.).

**Phoma dipsaci**, Cooke.

Caulicolous. Perithecia gregarious but not crowded, subglobose, papillate, elevating and at length piercing the cuticle. Sporules sublanceolate obtuse, binucleate ( $\cdot 009\text{--}\cdot 01 \times \cdot 0035$  mm.).

On stems of *Dipsacus sylvestris*. Kew, March.

**Phoma polemonii**, Cooke.

Caulicolous. Perithecia gregarious, globoso-depressed, black, shining, with a distinct acute ostium, soon becoming naked by the falling away of the thin cuticle. Sporules narrowly elliptical, not distinctly nucleate ( $\cdot 01 \times \cdot 003$  mm.).

On stems of *Polemonium caeruleum*. Kew, March.

**Phoma alcearum**, Cooke.

Caulicolous. Perithecia very numerous, densely gregarious in extensive patches, punctiform, membranaceous, fuscous, becoming darker with age, depressed, covered by the cuticle. Sporules elliptical, obtuse, enucleate, hyaline ( $\cdot 015 \times \cdot 005$  mm.).

On stems of *Althea rosea*. Kew.

Habit resembling *P. nebulosa*.

**Phoma caryophylli**, Cooke.

Perithecia rather large, convex, black, shining, seated on indefinite bleached spots. Sporules fusiform, somewhat obtuse at the extremities, scarcely distinctly nucleate, hyaline ( $\cdot 009 \times \cdot 003$  mm.).

On calyces, and sometimes the flower stems, of cultivated pinks and carnations. Shrewsbury. (Rev. W. Leighton.)

**Phoma Calystegiae**, Cooke.

Caulicolous, gregarious. Perithecia prominent, rather large comparatively, subglobose, elevating the blackened cuticle, sometimes seated on irregular bleached spots. Sporules sublanceolate, narrowed towards each extremity, binucleate, hyaline ( $\cdot 0075\text{--}\cdot 008 \times \cdot 0035$  mm.).

On dead stems of *Calystegia sepium*. Kew, Highgate, Dartford.

**Phoma Lysimachiae**, Cooke.

Caulicolous. Loosely gregarious, punctiform. Perithecia black, slightly elevating the blackened cuticle, minute, subglobose. Sporules broadly lanceolate, binucleate ( $\cdot 01 \times \cdot 0045\text{--}\cdot 005$  mm.), on short straight sporophores.

On stems of *Lysimachia vulgaris*. Kew.

**Phoma solidaginis**, Cooke.

Caulicolous. Perithecia gregarious, numerous, at first covered by the cuticle, then convex, black and shining, pierced with a minute pore. Sporules narrowly elliptical ( $\cdot 009\text{--}\cdot 01 \times \cdot 002$ ), binucleate, at first attached to very short stylospores.

On stems of *Solidago canadensis*. Kew Gardens, March.

**Phoma Labiatarum**, Cooke.

Caulicolous. Perithecia scattered, punctiform, minute, at length prominent, convex, black, shining, not papillate. Sporules oval, hyaline, colourless ( $\cdot 005 \times \cdot 003$  mm.), at first attached to short stylospores.

On dead stems of *Marrubium*. Kew Gardens, March.

**Phoma acori**, Cooke.

Follicolous. Perithecia gregarious, punctiform, minute, very numerous, seated beneath the cuticle, scarcely visible when dry, membranaceous, brown. Sporules oval or elliptical, obtuse ( $\cdot 006\text{--}\cdot 008 \times \cdot 003$  mm.).

On dead leaves of *Acorus calamus*. Totteridge, Kew, March.

In conjunction with *Leptosphaeria acorella*.

**Phoma tamicola**, Cooke.

Caulicolous. Perithecia gregarious, subglobose, soon depressed, covered by the blackened cuticle, which is at length pierced by the minute ostiola. Sporules obtusely fusiform, binucleate ( $\cdot 009\text{--}\cdot 01 \times \cdot 003$  mm.).

On stems of *Tamus communis*. Neatishead, Norfolk, 1870.

It is to us uncertain whether different from *Phoma Tami*, Lamy Exs. No. 798.

**Phoma onagracearum**, Cooke.

Caulicolous. Perithecia scattered, covered by the cuticle, which is slightly elevated and ultimately fissured or pierced, seldom gregarious. Sporules elliptical, binucleate, with short sporophores ( $\cdot 006\text{--}\cdot 008 \times \cdot 0035\text{--}\cdot 004$  mm.).

On stems of *Oenothera biennis* ( $\cdot 006\text{--}\cdot 008 \times \cdot 004$ ). On stems of *Epilobium angustifolium* ( $\cdot 008 \times \cdot 0035$ ). Kew, March.

**Phoma chamæropis**, Cooke.

Perithecia erumpent, gregarious, subglobose, black, opaque, irregular in size, pierced. Sporules elliptical, obtuse, not nucleate, hyaline ( $\cdot 004\text{--}\cdot 005 \times \cdot 002$  mm.).

On petioles of *Chamærops* and other palms. Kew.

Not unlike *P. cocoinea*, but sporules about half as long.

**Cytispora palmarum**, Cooke.

Conceptacles innate-erumpent, loosely gregarious ( $\frac{1}{2}\text{--}1$  mm. diam.), at first covered, at length cracking the cuticle. Cells few. Sporules sausage-shaped (allantoid),  $\cdot 006 \times \cdot 001$  mm., hyaline, profuse.

On palm petioles, &c. Kew.

**Cytispora microstoma**, Sacc. Syll. 1486.

var. *Cotoneastri*. Sporules  $\cdot 006\text{--}\cdot 007 \times \cdot 0015$  mm.

On *Cotoneaster frigida*. Kew.



var. *Amelanchieris*. Sporules  $\cdot 005$ - $\cdot 006$  mm. long.

On *Amelanchier*. Kew.

***Coniothyrium cassiacolum***, Cooke.

Perithecia gregarious, globose, covered with the thin cuticle, prominent, at length often free, brown, irregular in size. Sporules oval, unicellular, without nucleus, pellucid, pale brown ( $\cdot 006 \times \cdot 004$  mm.).

On stems of *Cassia marylandica*. Kew.

***Diplodina ammophila***, Trail in Scot. Nat. i. 76.

Perithecia scattered in the spaces between the nerves, oval, opening by a slightly papillate ostium on back of leaf, dark. Sporules hyaline, broadly fusiform ( $\cdot 03$ - $\cdot 012$  mm.), uniseptate; cells very distinctly outlined. Each end of the spore bears a short mucoid appendage, or papilla.

On dead leaves of *Ammophila arundinacea*. Aberdeen.

***Diplodia Coryphæ***, Cooke.

Immersed, erumpent, cracking the cuticle in linear longitudinal fissures. Perithecia small, black, covered. Sporules subglobose, or oval, not constricted, uniseptate, with a thin epispore, pale fuliginous ( $\cdot 014$ - $\cdot 017 \times \cdot 01$ ).

On petioles of fan palms. Kew.

***Diplodia inconspicua***, Cooke.

Hypophyllous. Perithecia minute, immersed, inconspicuous, gregarious, over the whole under surface of the leaf, covered by the cuticle, which is not discoloured. Sporules elliptical, not constricted, uniseptate, pale brown ( $\cdot 012 \times \cdot 006$  mm.).

On dead leaves of *Buxus sempervirens*. Kew.

Very different from *D. Buxi*. Difficult to distinguish, as the cuticle is hardly elevated and but slightly darker over the minute perithecia, which latter are about one-tenth of a millimetre in diameter.

***Diplodia genistarum***, Cooke.

Somewhat scattered. Perithecia immersed in the bark, covered by the cuticle, scarcely visible, globose. Sporules elliptical, uniseptate, not constricted, rather pale brown ( $\cdot 012$ - $\cdot 014 \times \cdot 006$  mm.).

On twigs of *Genista aetnensis* and *Coronilla emerus*. Kew.

***Diplodia Paulowniæ***, Cooke.

Somewhat scattered. Perithecia subglobose, black, at length erumpent, but not superficial. Sporules elliptic, scarcely constricted, uniseptate, clear brown ( $\cdot 020$ - $\cdot 022 \times \cdot 008$  mm.).

On twigs of *Paulownia imperialis*. Kew.

Mixed with *Plæospora* and *Phoma*.

***Hendersonia equiseti***, Trail in Scot. Nat. i. 76.

Perithecia subdermal, with a small ostium, nearly spherical (about 180 m. in diam.). Sporules pale brown, fusiform, or nearly cylindrical, with rather obtuse ends ( $\cdot 012$ - $\cdot 02 \times \cdot 002$ - $\cdot 003$  mm.), triseptate.

In dead stems of *Equisetum*. Aberdeen.

**Hendersonia sarmentorum**, West. var. **Lauri**.

On *Laurus nobilis*. Kew.

Probably this species, but sporules  $0.18 \times 0.005$  mm., which exceeds that of the typical form considerably.

**Hendersonia coronillæ**, Cooke.

Perithecia scattered or gregarious, covered by the cuticle, which is slightly elevated, subglobose or depressed. Sporules at first like those of *Diplodia*, elliptical, uniseptate, brown ( $0.12-0.06$  mm.), then elongated, straight, or slightly curved, triseptate ( $0.18 \times 0.07$  mm.).

On slender twigs of *Coronilla emerus*, and of *Baccharis halimifolia*. Kew.

**Camarosporium Berberidis**, Cooke.

Gregarious. Perithecia small, subglobose, covered by the slightly-elevated cuticle, with the habit of a *Phoma*. Sporules variable in size, at first pale and uniseptate, elliptical, not constricted, at length triseptate, constricted at each septum, with the two central cells longitudinally divided, clear brown ( $0.22-0.25 \times 0.06-0.09$  mm., when mature).

On small twigs of *Berberis vulgaris*. Kew, March.

**Hendersonia Fiedleri**, West. Sacc. Syll. No. 2299.

var. **Symphoricarpi**, Cooke.

Sporidia triseptate ( $0.18 \times 0.04$  mm.), slightly coloured.

On slender twigs of *Symphoricarpus racemosus*. Kew, Swanscombe.

**Hendersonia rubi**, Sacc. Syll. 2316.

var. **rosarum** (= *H. rosæ*, Fries.)

On wild rose. Kew Gardens, April, 1885.

**Camarosporium Limoniæ**, Cooke.

Gregarious. Perithecia covered by the elevated cuticle, which is ultimately fissured, depressed, brown, scarcely papillate. Spores elliptical, rounded at the ends, triseptate, sometimes, but not constantly, with one cell longitudinally divided, scarcely constricted at the septa, becoming of a clear nut-brown colour ( $0.22-0.28 \times 0.07-0.1$  mm.), at first shortly pedicellate.

On twigs and spines of *Citrus trifoliata*. Kew.

**Stagonospora heleocharidis**, Trail in Scot. Nat. 1. 76.

Perithecia scattered, subdermal, with a small ostiolum, nearly spherical (130 to 170 m. diam.). Sporules pale yellowish, fusiform ( $0.3-0.4 \times 0.06-0.07$  mm.), five to seven septate.

In dead leaves and stems of *Heleocharis palustris*. Aberdeen.

**Camarosporium spirææ**, Cooke.

Scattered. Perithecia rather large, covered by the elevated cuticle, globose, black, erumpent. Sporules elliptical, mostly triseptate, with one or two transverse septæ, not constricted, pale brown ( $0.18 \times 0.075$  mm.).

On slender twigs of *Spiræa callosa* and *S. opulifolia*. Kew.

**Leptothyrium medium**, Cooke.

Hypophyllous. Perithecia scattered, rather large ( $\frac{1}{2}$  mm. diam.), depressed, circular, dark brown. Sporules crescent-shaped, narrow, attenuated to each extremity ( $.012-.014 \times .002$  mm.).

On dead leaves of *Quercus*. Gomshall, 1874.

Scattered over the whole under surface, without any discoloured spots. Similar in habit to *L. macrothecium*, but with larger spores.

var. **Castanæcola**, Cooke.

Perithecia not more than half the diameter of those on oak leaves, but the fructification the same.

On leaves of *Castanea*. Darenth, 1874.

**Glaeosporium Berberidis**, Cooke.

Hypophyllous. Pustules gregarious, numerous, convex, seated on broad discoloured patches of the fading leaves, sometimes occupying the whole surface; pustules pallid, spots brown with a bright red margin. Conidia ovoid, hyaline ( $.005 \times .003$  mm.).

On fading leaves of *Berberis asiatica* and other species. Kew Gardens, March.

**Ovularia Berberidis**, Cooke.

On the under surface, effused, greyish white, forming thin frosty-looking patches. Hyphæ short, simple. Conidia oval or elliptical, hyaline ( $.015-.018 \times .008-.009$  mm.).

On fading leaves of *Berberis asiatica* and other species. Kew Gardens.

**Valsa (Chorostate) Hippocastani**, Cooke.

Pustules composed of a few perithecia (6-8) nestling in the bark, and elevating the cuticle, which is at length pierced by the short convergent ostiola. Perithecia subglobose, depressed, usually forming definite clusters, black. Asci clavate, sessile, eight-spored. Sporidia fusiform, biseriate, uniseptate, biguttulate, a little constricted at the septum, sometimes with a very small hyaline apiculus at each extremity, hyaline ( $.025-.028 \times .005-.007$  mm.).

On branches of *Æsculus hippocastanum*. Kew, Bushey Park, Hampton Court, and Honnington (Suffolk).

In many respects resembling *Cryptospora Æsculi*, Fckl., but distinctly uniseptate.

**Valsa (Chorostate) Ailanthi**, Sacc. *Syll. No.* 2408.

Stroma valsæoid. Pustules scattered, small (5-6 perithecia), seated on and immersed in the wood, with the stroma circumscribed, at first covered by the epidermis, and when fissured encircled by it. Perithecia roundish ( $\frac{1}{3}$  mm. diam.), ostiola elongated, cylindrical, connivent in a small black disc. Asci cylindrical fusiform ( $.05 \times .007$  mm.). Sporidia oblong, fusiform, quadriguttulate, then uniseptate, slightly constricted at the septum, hyaline ( $.012-.015 \times .004$  mm.).

At the extremity of young, dead twigs of *Ailanthus glandulosa*. Kew.

**Diaporthe ophites**, Sacc. Syll. No. 2595.

Stroma broadly effused in the bark and the surface of the wood, forming variable brown and black spots, limited internally by a black line. Perithecia gregarious, globose, of medium size, imbedded in the bark (rarely in the wood). Ostiola filiform, about as long as the diameter of the perithecium. Asci fusiform. Sporidia biseriata, shortly fusiform, uniseptate, slightly constricted, quadri-nucleate, rather obtuse at each end, hyaline ( $\cdot 012\text{--}\cdot 013 \times \cdot 0045\text{--}\cdot 005$  mm.).

On dead twigs of *Hibiscus syriacus*. Kew, March, 1885.

Mixed with *Phoma ophites*, Sacc.

**Sphaeria (Physalospora) rosicola**, Fekl. Sacc. Syll. 1662.

Perithecia gregarious, covered by the shining blackened cuticle, minute, globose, black, with a white nucleus, ostiola somewhat prominent, papillate, perforated. Asci fasciculate, oblong-ovate (sub-cylindrical?) eight spored. Sporidia obovate oblong, narrower at one end, simple, granular, hyaline ( $\cdot 018 \times \cdot 009$  mm.).

On *Rosa canina*. Kew, April, 1885.

Probably this species, but in the absence of any knowledge of the size of the sporidia in Fuckel's specimens, it must be uncertain.

**Sphaerella (Læstadia) rhodornæ**, Cooke.

Epiphyllous. Perithecia gregarious, seated upon large irregular ferruginous spots, immersed in the parenchyma, subglobose, black, piercing the cuticle with the punctiform ostiola. Asci clavate, without paraphyses ( $\cdot 80\text{--}\cdot 120 \times \cdot 16$ ). Sporidia elliptical, hyaline, continuous (perhaps  $\cdot 015 \times \cdot 007$  mm., but too immature to measure with certainty).

On living leaves of *Rhododendron*. Kew.

This can scarcely be the *Læstadia rhododendri*, D. Not, of Saccardo's Sylloge.

**Sphaerella (Læstadia) Iridis**, Cke.

Caulicolous. Perithecia loosely gregarious for some inches, punctiform, covered by the cuticle, which is pierced by the minute ostiolum. Asci clavate sessile, octosporous. Sporidia elliptical, slightly attenuated towards each extremity ( $\cdot 012\text{--}\cdot 014 \times \cdot 004\text{--}\cdot 005$  mm.) hyaline.

On flower stalks of *Iris germanica*. Kew Gardens, March.

**Plæospora herbarum**, var. *Iridis*.

Sporidia 7 septate, muriform, bright amber colour,  $\cdot 04 \times \cdot 016$  mm.

On flower stalks of *Iris germanica*. Kew Gardens.

In company with *Sphaerella (Læstadia) Iridis*.

**Leptosphaeria (Metasphaeria) acorella**, Cooke.

Scattered, epiphyllous. Perithecia minute, subglobose, at first covered, then erumpent, and the upper portion exposed, slightly papillate, black. Asci clavate, eight-spored. Sporidia fusiform, biseriata, five septate, constricted a little at the central septum, at first nucleate, hyaline  $\cdot 03\text{--}\cdot 035 \times \cdot 006$  mm.

On leaves of *Acorus calamus*—mixed with *Phoma acori*. Tottenham. Kew.

**Diatrype Brassicae, Cooke.**

Stroma broad, black, indeterminate, sometimes spreading two or three inches, in which the perithecia are immersed, and into the subjacent tissue, circumscribed by a black line. Perithecia globose, sometimes scattered, but mostly aggregated in definite groups of 6 or 8, elevating the stroma in a convex disc, ostiola obtuse, almost obsolete, or elongated and flexuous 1-2 mm. long. Asci stipitate, clavate ( $\cdot 022 \times \cdot 006$  mm. in the upper half). Sporidia eight, minute, allantoid, hyaline ( $\cdot 006 \times \cdot 0015$  mm.).

On dead cabbage stems. Kew.

Of course this is quite distinct from *Diatrype coramblycola*, B. & Br., which is a *Diaporthe*, and is a most characteristic species.

## SYNOPSIS PYRENOMYCETUM.

(Continued from p. 72.)

The following species do not appear to belong to *Rhytisma* :—

- ulmi, *Fr. El.* II., 128.
- juglandis, *Schw. Am. Bor.* 2038.
- smilacis, *Schw. Fr. S. M.* II., 570=*Microthyrium*.
- pedicularis, *Klot. Fr. Sys. Myc.* II., 602.
- asteris, *Schw. Syn. Car.* 271.
- solidaginis, *Schw. Am. Bor.* 2034.
- stellare, *Kickx. Bull. Brux.*=*Euryachora*.
- sedi, *Corda Sturm.*=*Euryachora*.
- heraclei, *Corda Sturm.*
- confluens, *Fr. Sys. Myc.* II., 570=*Leptostroma*.
- elevatum, *Schw. Am. Bor.* 2044=*Phoma*.
- silphii, *Schw. Am. Bor.* 2045=*Leptostroma*.
- seriale, *Schw. Am. Bor.* 2041=*Leptostroma*.
- padi, *Klot.*
- robiniae, *Schw. Am. Bor.* 2022=*Ectostroma*.
- chrysanthemi, *Kirch. Lotos*, 1856, 205.
- Euphorbiae, *Schub. Fic. Fl. Dresd.*=*Melampsora*.
- Violae, *Kirch. Lotos*, 1856, 205.
- Bistortae, *Lib. Crypt. Ard.*
- riccioides, *Lev.*=*Trabutia quercina*.
- agglutinatum, *Schw. Syn.* No. 2046.
- Linnæae, *Strauss in Sturm*=*Wittrockii*.
- Empetri, *Fr. El.* II., 127=*Duplicaria*.
- maculans, *Mont. Syll.* 193=*Phyllachora*.
- pandani, *Ayres*=*Ailographum*.
- corrugatam, *Fr.*=*Placosphaeria*.
- minutulum, *Grog. in Fungi Gall.* 455.
- zeinum, *Ber. Act. Milan*, 1844.
- =*Cotini*, *Ces. Herb. Myc.* II., 566.
- Lathyri D.C., } *Fr. Sys. Myc.* II., 569.
- Onobrychidis D.C., }

**Botryosphaeria mutila** (*Sphaeria mutila*, Schwein. Amer. Bor. No. 1439, sec. spec.)

Stromate innato. Peritheciis in series flexuosas erumpentibus, subconfluentibus, globosis, superiore parte prominente inaequali rugosa, intus albedo farcta. Ascis clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis ( $\cdot 02 - \cdot 022 \times \cdot 009$  mm.)

On *Populus*, &c. United States.

Probably this has been merged in the very unsatisfactory species called *B. Berengeriana*, de Not.; but it certainly has priority. We have no doubt of Schweinitz having in some of his specimens, under this name, a species with narrow elliptical brown sporidia ( $\cdot 018 \times \cdot 006$  mm.), but the fragments are too imperfect and small for diagnosis.

**Botryosphaeria subconnata** (Schweinitz Amer. Bor. No. 1443. Sacc. Syll. 4240. *Wisteria valsarioidis*, Rehm. in Thum. Myc. Univ. No. 2166.

According to authentic specimen in Herb. Berk. No. 9025.

On *Gossypium*.

**Botryosphaeria Syringæ**, Schweinitz Amer. Bor. No. 1667.

Ascis elongato-clavatis, octosporis. Sporidiis arcte ellipticis, continuis, hyalinis ( $\cdot 026 - \cdot 028 \times \cdot 008$  mm.)

On branches of *Syringa*. United States (Ellis 3111).

**Botryosphaeria callicarpæ**, Cooke in Rav. Amer. Fungi, No. 767.

Longitudinaliter erumpens. Stroma elongatum. Peritheciis parvulis confluentibus, atris. Ascis clavatis. Sporidiis continuis, (immaturis).

On bark of *Callicarpa americana*. Darien, Georgia.

**Botryosphaeria abrupta**, Berk. & Curt. in Herb. Berk. No. 9013.

Stromatibus erumpentibus, epidermide fissurato arcte cinctis, subdiscoideis. Peritheciis globosis, semi-immersis, atris, demum confluentibus, truncato-obtusis, abruptis, intus albus. Ascis clavatis, octosporis. Sporidiis elliptico-fusiformibus, utrinque subattenuatis, obtusis, continuis, hyalinis, flavescentibus, intus granulosis ( $\cdot 022 - \cdot 024 \times \cdot 01$  mm.)

On *Cyrilla*. Carolina, U.S.

**Botryosphaeria melathroa**, Berk. & Curt. in Herb. Berk. No. 9014.

Stroma longitudinaliter effusum, innatum, erumpens. Peritheciis ovatis confertis, subdiscretis, atris, ad apicem rotundatum, paululis. Ascis clavato-cylindricis. Sporidiis ellipticis, continuis ( $\cdot 02 \times \cdot 008$  mm.) hyalinis.

On *Crataegus cordatus*. Pennsylvania.

**Botryosphaeria araliæ**, Curt. Cat. 143.

Stromatibus innato-erumpentibus, corticulis, subpulvinatis, nigris, plerumque lineato-aggregatis (1 mm. diam.), albo-farctis, peridermeo cinctis. Peritheciis vix distinctis, obtusiusculis, opacis. Ascis clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis ( $\cdot 018 \times \cdot 008$  mm.).

On bark of *Aralia spinosa*. Carolina.

**Botryosphaeria viburni**, Cooke.

Stromatibus erumpentibus, gregariis, minimis ( $\frac{1}{2}$ - $\frac{3}{4}$  mm. diam.), corticolis, depresso-pulvinatis, atro-fuscis, superficie tuberculosis, albo-farctis. Peritheciis (6-10) subimmersis, vertice convexis, pertusis. Ascis clavatis. Sporidiis arcte ellipticis, continuis, flavescenscentibus, intus granulosus ( $.018$ -. $.021 \times .008$  mm.).

On branches of *Viburnum opulus*. United States.

Closely allied to *B. araliae*, Curt., of which it may be a variety.

**Botryosphaeria hypericorum**, Cooke in Herb. Berk. 9030 bis.

Subelliptica, planiuscula, atra. Peritheciis parvulis, connatis, albo-farctis, epidermide fissa arcte cinctis. Ascis clavatis, octosporis. Sporidiis anguste ellipticis, continuis, hyalinis (circa  $.02 \times .005$  mm. immaturis).

On stems of *Hypericum proliferum*. United States (No. 2864).

Although the sporidia are so immature that it is difficult to distinguish clearly their form and size, yet the habit and structure is so distinctly that of the present genus, that it has been inserted, subject to some reservation as to the sporidia.

**Botryosphaeria hypoxylodea**, Cooke.

Mox superficialis, hypoxylodea. Peritheciis minimis, in pustulas orbicularibus, convexis rugosis, atris, opacis, confluentibus. Ascis cylindrico-clavatis, octosporis. Sporidiis ellipticis, continuis, hyalinis,  $.012 \times .005$  mm.

On branches (unknown.) Australia.

Has just the habit and appearance of some species of *Hypoxylon*, but not carbonaceous.

**Botryosphaeria stomatica**, Schweinitz in Herb. Berk. No. 8823.

Latissime effusa, emergens, lignum atro inquinans. Peritheciis semi-immersis majusculis, ostiolis validis prominentibus, cylindraceis obtusis insignis. Ascis clavatis, octosporis, sporidiis ellipticis, continuis, fuscis  $.012$ -. $.013 \times .005$  mm.

On rotten wood. Indiana, United States. (Schweinitz.)

**Botryosphaeria (Myrmæcium) collematoides**, B. & Rav.

Stromate effuso, tenui, atro. Peritheciis parvulis, ovalibus, congestis, demum apice applanato, opaco, botryoideo-aggregatis, subconfluentibus. Ascis cylindraceis, octosporis. Sporidiis ellipticis, uniseptatis, vix constrictis, fuscis ( $.015 \times .007$  mm.).

On bark. United States.

This species, *M. insidens*, Schw., and *M. grandinea*, Berk., have been confounded together, but they are all manifestly distinct, although similar in habit and external appearance.

**Endothia Parryi** (Farlow.)

Stromatibus pulvinatis erumpentibus. Peritheciis numerosis, concentricè aggregatis, fuscis, epidermide cinnabarina cinctis. Ascis lineari-clavatis,  $.76$ -. $110 \times .16$ -. $20 \mu$ , paraphysatis; sporidiis octo-

nis irregulariter subdistichis, hyalinis  $20-26 \times 5-7 \mu$ , uniseptatis, ellipsoideis, subacutis, parce constrictis. *Dothidea Parryi*, Farlow, MSS.

On *Agave Shawii*. S. W. States of N. America.

**Melogramma (Valsaria) gemmata**, Berk. & Rav. *North Amer. Fungi*. No. 831. *Hypoxyton gemmatum*, Sacc. *Syl.* No. 1369. *Hypoxyton Walterianum*, Rav. *Fungi Car.* IV. 35.

Sporidiis uniseptatis, fuscis ( $0.1-0.12 \times 0.06$  mm.).

**Melogramma (Valsaria) Hookeri**, Cooke.

Acervulis erumpentibus, discoideis, atris. Peritheciis prominentibus, minimis, confluentibus, vel subdiscretis. Ascis clavatis. Sporidiis lanceolatis, uniseptatis, valde constrictis, fuscis  $0.35-0.45 \times 0.07$  mm.

On bark. South Marocco (*Sir J. D. Hooker*).

**Melogramma (Valsaria) phoradendri**, B. & Curt., *Curt. Cat.* 143.

Peritheciis gregariis, tectis, demum cortice fissurato erumpentibus, atris, obtusis. Ascis subcylindricis. Sporidiis subellipticis, uniseptatis, leniter constrictis, fuscis  $0.28-0.3 \times 0.1-0.12$  mm.

On bark of *Phoradendron flavescens*. U. States.

**Melogramma (Valsaria) grandinea**, Berk. nec *Diatrype grandinea*, B. & Rav. *Melogramma insidens*, Berk. in *Grev.* IV., 99, nec *Schweinitz*.

Stromate effuso, subrotundo, fusco-nigro. Peritheciis emergentibus, confertis, ovatis, apice depresso subumbilicato. Ascis clavatis. Sporidiis ellipticis, uniseptatis, nec constrictis ( $0.08 \times 0.04$  mm.) fuscis, diu continuis. Berk. in *Herb.* 9020.

On bark of *Fraxinus*. United States.

**Melogramma platyroa**, Berk. & Curt. *Hypoxyton platyrous*, Berk. in *Herb.*

Peritheciis botryoideo-aggregatis, erumpentibus, subeffusis, rarius liberis, pulvere griseo subtus conspersis. Ascis clavatis, octosporis. Sporidiis fusiformibus, triseptatis, hyalinis ( $0.2-0.22 \times 0.04$  mm.). *Herb. Berk.* No. 8678.

On naked wood. Pennsylvania, U.S.

**Melogramma Spraguei**, B. & C. No. 3994.

Has no affinity with *Thyridium*. It occurs on small branches, and not on the naked wood. The sporidia have only an occasional transverse septum, so that they cannot possibly be termed "murali-divisa."

**Melogramma meliae**, Curtis in *Herb. nec. Schweinitz*.

Acervulis erumpentibus, atris, subdiscoideis vel oblongis. Peritheciis prominentibus, demum subligeratis, rugosis, apice applanato. Ascis clavatis, majusculis octosporis. Sporidiis sublancoelatis, triseptatis, nec constrictis, rarius quinque-septatis ( $0.38-0.42 \times 0.1$  mm.) fuscis.

On *Melia*. United States.



*Sub.-Fam. II. RHYTISMOIDEI.*

GEN. 6. **RHYTISMA**, *Fries.*—Stroma applanatum, discoideum, vel effusum, pluriloculatum, primo clausum, demum in rimas flexuosas vel transversales frustulatim rumpens.

\* *Sporidia continua, hyalina.*

- |  |  |
|--|--|
| 1295. maximum, <i>Fr. Syst. Myc.</i>                           | 1299. grewiæ, <i>Kalch., Grev. ix.</i> ,<br>ii., 566.            |
| 1296. Curtisii, <i>B. &amp; Rav., N. Amer. Fungi.</i> No. 780. | 1300. pongamiæ, <i>B. &amp; Br., Ceylon Fungi</i> , 1128.        |
| 1297. eugeniacearum, <i>Corda Ic.</i>                          | 1301. myrciæ, <i>Mont. Syll.</i> 193.                            |
| iv., f. 130.   | 1302. myricæ, <i>Mont. Syll.</i> 193.                            |
| 1298. Austini, <i>Cke., Grev. vii.</i> , 48.                   | 1303. circumscissum, <i>Lev. Ann. Sci. Nat.</i> , 1846, v., 254. |

\*\* *Sporidia uniseptata, hyalina.*

- |  |  |
|--|--|
| 1304. ustulatum, <i>Cooke, Grev.</i>                           | 1307. spurcarium, <i>B. &amp; Br., Ceylon Fungi</i> No. 1131.  |
| v., 17.  |  |
| 1305. maculosum, <i>B. &amp; Br., Ceylon Fungi</i> No. 1126.   | 1308. leptospilum, <i>B. &amp; Curt., Cuba Fungi</i> No. 721.  |
| 1306. pterygotæ, <i>B. &amp; Br., Ceylon Fungi</i> , No. 1129. | 1309. filicinum, <i>B. &amp; Curt., Ceylon Fungi</i> No. 1127. |

\*\*\* *Sporidia uniseptata, fusca.*

- |   |   |
|---|---|
| 1310. placentæ, <i>B. &amp; Fr., Ceylon Fungi</i> 1130. | 1312. astrocaryi, <i>Mont. Syll.</i> , 194. |
| 1311. porrigo, <i>Cooke, Grev. x.</i> , 129.            |   |

\*\*\* *Sporidia 3 septata, hyalina.*

1313. rubiæ, *Mont. Syll.*, p. 194.

\*\*\* *Sporidia filiformia, hyalina.*

- |   |  |
|---|--|
| 1314. acerinum, <i>Pers. Syn.</i> 104.                  | 1318. andromedæ, <i>Fr. Syst. Myc.</i> ii., 567.     |
| 1315. punctatum, <i>Fr. Syst. Myc.</i> ii., 569.        | 1319. arbuti, <i>Phil., Grev. vii.</i> , 13.         |
| 1316. salicinum, <i>Fr. Syst. Myc.</i> ii., 568.        | 1320. urticæ, <i>Fr. Syst. Myc.</i> ii., 570.        |
| v. umbonatum, <i>Rabh.</i>                              |  |
| 1317. australe, <i>D. R. &amp; M., Mont. Syll.</i> 193. | 1321. ilex-canadensis, <i>Schw. Am. Bor.</i> , 2026. |

*Sporidia ignotæ.*

- |   |   |
|---|---|
| 1322. fuscum, <i>Fr. Linn.</i> v., 551.   | 1325. ilicincola, <i>Fr. Syst. Myc.</i> ii., 568. |
| 1323. velatum, <i>Schw. Syn.</i> No. 270. | 1326. prini, <i>Fr. Syst. Myc.</i> ii., 568.      |
| 1324. Blakei, <i>Curt. in Herb. Berk.</i> |   |

1327. *vaccinii*, *Fr. Sys. Myc.* ii., 567  
 1328. *decolorans*, *Fr. Sys. Myc.* ii., 567  
 1329. *piceum*, *Berk. Hook. Journ.*, 1854, 210  
 1330. *vitis*, *Schw. Am. Bor.* 2037.  
 1331. *nitidum*, *Lev. A. S. N.*, 1846, v., 254  
 1332. *abyssinicum*, *Mont. & Berk.*  
 1333. *bauliniae*; *Nees. Presl. Reliq. i.*, 1  
 1334. *magnoliae*, *Schw. Amer. Bor.* 2039  
 1335. *psidii*, *Rud. Linn.* iv., 118.  
 1336. *sassafras*, *Schw. Am. Bor.* 2036  
 1337. *rhododendri*, *Fr. Sys. Myc.* ii., 567  
 1338. *rufulum*, *B. & Curt., Cuba Fungi* 722  
 1339. *atramentarium*, *B. & Curt., Cuba* 716  
 1340. *gyrosum*, *Mont. Syll.* 193  
 1341. *micraspis*, *B. & Curt., Cuba* 720  
 1342. *conoideum*, *Cke., Grev.* v., 16  
 1343. *durissimum*, *Cke., Grev.* v., 16  
 1344. *monogramme*, *B. & Curt., N. A. F.* 782  
 1345. *laciniatum*, *Fr. Syst. Myc.* ii., 566  
 1346. *concentricum*, *B. & Curt., Cuba* 719  
 1347. *aceris-eriocarpæ*, *Schw. Am. Bor.* 2032  
 1348. *lagerstræmiæ*, *Rabh. F. E.* 2310  
 1349. *austro-caledonicum*, *Crie. Bot. Jahrs.*, 1876, 108  
 1350. *nervale*, *A. & S. Consp.* t. 7, f. 7  
 1351. *empetri*, *White, Ann. N. H. No.* 1650

*Herbicolæ.*

1352. *hysterioides*, *Fr. Sys. Myc.* ii., 571  
 1353. *bifrons*, *Schw. Am. Bor.* 2035  
 1354. *giganteum*, *Fr. Sys. Myc.* ii., 567  
 1355. *cacti*, *Schw. Am. Bor.* 2040.  
 1356. *asperulæ*, *Rabh. Itin.*

*Sub.-Fam. III. STIGMATEOIDÆ.*

*Perithecia* plus minusve discreta, plerumque simplices et superficiales.

GEN. 7. **HYPOSPILA**, *Fr.* *Perithecia* plus minus discreta, pseudostromate phyllogeno immersa.

\* *Sporidia uniseptata, hyalina.*

1357. *bifrons*, *D. C.* ... 3535  
 1358. *immunda*, *Fckl.* ... 3536  
 1359. *ceuthosporioides*, *B.* 2488

\*\* *Sporidia 3 septata, hyalina.*

1360. *pustula* (*Pers.*) ... 3533  
 1361. *Rehmii*, *Sacc.* ... 3534

\*\* *Sporidia filiformia.*

1362. *saligna*, *Fr.* ... 4088  
 1363. *arctica*, *Karst.* ... 4089  
 1364. *tigrina*, *Fckl.* ... 4090  
 1365. *vulgaris*, *Fckl.* ... 4091  
 1366. *populina*, *Pers.* ... 4103  
 1367. *viburni*, *Buck. Grev.* xii. 44

**\*\* HYOPTERIS.** *Sporidia continua, fusca.*

1368. bambusæ, *Lev.* ... 1074

**\*\*\* ISOTHÆA.** *Sporidia muriformia, fusca.*

1369. nyssæ, *B. & C.* ... 3875

GEN. 8. **TRABUTIA**, *Sacc. Syll. i., 449.*—Stroma phyllogenum, rhytismoideum, atrum.

**\* Sporidia continua, hyalina.**

1370. quercina, *Rud.* ... 1733    1372. tosta, *B. & C., North Am.*

1371. erythrospora, *B. & C., Fungi* 781

*Fungi* 783

**\*\* Sporidia uniseptata.**

1373. constellata, *B. & Br.,*

*Ceylon F.* 1132

GEN. 9. **PARODIELLA**, *Speg.*—Perithecia superficialia, globosa astoma, atra, basi foliis adnata.

**\* Sporidia uniseptata, hyalina.**

1374. simillima, *B. & C.* 5096

**\* Sporidia uniseptata fusca.**

1375. grammodes, *Kze.*... 5279    = *seminata*, *B. & R.* 2114  
= *perisporioides*, *B.* 2711

**\*\* Sporidia ignota.**

1376. zeinam, *Ber. Act. Milan* 1377. melioloides, *B. & Br.* 1021  
1844

= *cotini*, *Ces. Herb. Myc. ii.,* 566

GEN. 10. **STIGMATEA** (*Fr.*), *Sacc. Syll. i., 541.*—Perithecia prominula, crassiuscule contexta, ostiolo minuto.

**I. EUSTIGMATEA.** *Sporidia uniseptata.*

1378. Robertiani, *Fr.* ... 2105    1384. sequoiæ, *Cke.* ... 2110

1379. geranii, *Fr.* ... 2106    1385. sylvatica, *Sacc.* ... 6072

1380. confertissima, *Fckl.* 2107    1386. andromedæ, *Rehm.* 2111

1381. maculæformis, *Fr.* 2108    1387. Jenensis, *Kunze.* ... 2112

1382. Nicholsoni, *Cke.* ... 6073    1388. sclerotidea (*Cke.*) 2113

1383. ranunculi, *Fr.* ... 2109

**II. STIGMATULA.** *Sporidia continua.*

1389. sutherlandiæ, *K. & C.* 2115    1391. gregaria, *Cke.* ... 2117

1390. rhynchosia, *K. & C.* 2116    1392. submaculans, *Mont.* 2118

**III. Species dubiæ.**

1393. impressa, *Fr.* ... 2119    1397. polygonorum, *Fr.* 2123

1394. conferta, *Fr.* ... 2021    1398. ostruthii, *Fr.* ... 2124

1395. coriariæ, *Mont.* ... 2121    1399. ægopodii, *Fr.* ... 2125

1396. lentisci, *Mont.* ... 2122

*Fam. 4. MELOGRAMMÆ, Ntkc.* Peritheciis a stromate formatis vel in stroma confluentibus, apice subliberis, plerumque collo destitutis.

GEN. 1. **SARCOXYLON**, *Cooke*. Stroma subglobosum, pallidum, perithecia immersa periphærica membranacea.

\* *Sporidia continua, fusca.*

a. episporio lævi.

1400. *compunctum, Jungh.* 1231

b. episporio verrucoso.

1401. *lycogaloides, Berk.* 1342

GEN. 2. **BOTRYOSPHERIA**, *De Not.* Perithecia erumpenti-superficialia, basi stromatici suffulta, cæspitosa vel confluens.

\* *Sporidia continua, hyalina.*

- |   |   |
|---|---|
| 1402. <i>quercuum, Schw.</i> ... 1762     | 1420. <i>ficus, Cooke</i> ... 6023            |
| = <i>fuliginosa, Pers.</i>                | 1421. <i>meliae, Schw.</i> ... 1778           |
| 1403. <i>mutila (Fr.) Schwein.</i>        | 1422. <i>hibisci, Schw.</i> ... 1779          |
| <i>Grev.</i> xiii. 101                    | 1423. <i>præstans, Lev.</i> ... 1780          |
| 1404. <i>Berengeriana, De Not.</i>        | 1424. <i>sorosia, Lev.</i> ... 1781           |
| 1763                                      | 1425. <i>lanaris, Welw. &amp; Curr.</i> 1782  |
| = <i>Mori, De Not.</i>                    | 1426. <i>diploidioides, D. R.</i>             |
| 1405. <i>arctostaphyli, Plow.</i> 1764    | <i>&amp; M.</i> ... 1785                      |
| 1406. <i>juglandis, Mont.</i> ... 1765    | 1427. <i>vitis, Schulz.</i> ... 1787          |
| 1407. <i>cerasi, C. &amp; E.</i> ... 1766 | 1428. <i>mascarensis, Mont.</i> 1788          |
| 1408. <i>advena, Ces.</i> ... 1767        | 1429. <i>horizontalis, B. &amp; C.</i> 1789   |
| = <i>melanops, Tul.</i>                   | 1430. <i>liriodendri, Cke.</i> ... 1798       |
| 1409. <i>aterrima, Fekl.</i> ... 1768     | 1431. <i>syringæ, Schw., Gr.</i> xiii.        |
| 1410. <i>cratægi, Schw.</i> ... 1769      | 101   |
| 1411. <i>pyriospora, Ellis</i> ... 1770   | 1432. <i>callicarpæ, Cooke, Grev.</i>         |
| 1412. <i>ambigua, Schw.</i> ... 1771      | xiii. 101                                     |
| 1413. <i>wisteriæ, Rehm.</i> ... 1772     | 1433. <i>pseudotubulina, Ces.</i> 1879        |
| 1414. <i>subconnata, Schw.</i> 4240       | 1434. <i>propullans, Schw.</i> ... 4239       |
| 1415. <i>Delilei, D. R. &amp; M.</i> 1773 | 1435. <i>abrupta, B. &amp; C., xiii.</i> 101  |
| 1416. <i>dothidea, M. &amp; N.</i> 1774   | 1436. <i>melathroa, B. &amp; C. xiii.</i> 101 |
| = <i>Rosæ, Fr.</i>                        | 1437. <i>araliæ, Curt. Cat.,</i> 143          |
| 1417. <i>persimon, Schw.</i> .. 1775      | 1438. <i>viburni, Cke, Gr., xiii.</i> 102     |
| 1418. <i>venenata, C. &amp; E.</i> 1776   | 1439. <i>hypericorum, Cke, Gr., xiii.</i>     |
| 1419. <i>syconophila, DeNot.</i> 1777     | 102   |

b. *sporidia minima.*

1440. *rhizogena, Berk.* ... 1786    1441. *hypoxylodea, Cooke, Grev.*  
xiii. 102

c. *species inquirendæ.*

1442. <i>graphidea, B. &amp; C.</i> 1791	1445. <i>chnaumatica, Wallr.</i> 1795
1443. <i>escharoides, Fr.</i> ... 1793	1446. <i>calycanthi, Schw.</i> ... 1796
1444. <i>polita, Fr.</i> ... 1794	1447. <i>castanæ, Schw.</i> ... 1797

## d. MELOGRAMELLA. Ostiolis subrostratis.

\* *Sporidia continua*, *hyalina*.1448. ferruginea, *Fckl.*... 1799 1449. Van Vleekii, *Schw.* 1800\*\* *Sporidia continua*, *fusca*.1450. decipiens, *D.C.* ... 1126 1452. stomatica, *Schw.*, *Grev.*  
1451. hiascens, *Fr.* ... 1125 xiii. 102\* MYRMÆCIUM. *Sporidia uniseptata*, *hyalina*.1453. endoleucum, *Sacc.* 2340 1455. dichænoides, *B. & C.* 2387  
1454. collematoides, *B. & Rav.*, 1456. subaquila, *B. & C.* 2366  
*Grev.* xiii. 102\*\* MELANOPS. *Sporidia biseptata*, *hyalina*.1457. mirabilis, *Fckl.* ... 3694GEN. 3. **ENDOTHEIA**, *Fr.* Stroma diatrypeum, crocatum, perithecia immersa nigricantia.\* *Sporidia uniseptata*, *hyalina*.1458. gyrosa, *Schw.* ... 2342 1459. Parryi, *Farl., Gr.* xiii. 102GEN. 4. **FUCKELIA**, *N.* Stroma erumpens, subgloboso-pulvinata hypoxyleum, perithecia peripherica, immersa.\* *Sporidia continua*, *fusca*.1460. microspora, *Karst.* 1143 1464. Morsei, *B. & C.* ... 1441  
1461. gastrina, *Fr.* ... 1129 = *Blakei*, *B. & C.* 1343  
1462. Plowrightii, *Nsl.* 1134 1465. rhenana, *Fckl.* ... 1144  
1463. Carterii, *B. & Cke., Grev.* 1466. diathrauston, *Rehm.* 1385  
xii., 51GEN. 5. **CAMAROPS**, *Karst.* Stroma crustaceum, emergens, hypoxyleum, perithecia immersa.

## a. Stroma limitata.

\* *Sporidia uniseptata*, *fuscidula*.1467. hypoxyloides, *Karst.* 2849\*\* *Sporidia pluriseptata*, *fusca*.1468. giganteum, *Mont.* 3820

## b. Stroma effusa.

1469. grandinea, *B. & Rav.* 1114GEN. 6. **MELOGRAMMA**, *Fr.* Stromata erumpenti-superficialia, subgloboso-pulvinata vel subeffusa, perithecia botryoideo-aggregata, plurima stromata immersa prominulaque.\* *Sporidia continua*, *fusca*.1470. examinans, *B. & M.* 5247 1472. atrofusca, *B. & C., Grev.*  
1471. aceris, *C. & E.* ... 1423 xii., 51.  
1473. insidens, *Schwein.* 2341

\*\* VALSARIA. *Sporidia uniseptata, fusca.*

## a. pustulata.

- |   |   |
|---|---|
| 1474. rubricosa, Fr. ... 2814           | 1480. cinnamomi, Ces. ... 2832            |
| 1475. gemmata, B. & Rav. 1369           | 1481. Hookeri, Cke, Gr. xiii. 103         |
| = <i>Walterianum</i> , Rav.             | 1482. phoradendri, Curt., Grev. xiii. 103 |
| 1476. eucalypti, Kalch. & Cke. ... 2823 | 1483. robiniae, Schw. ... 4133            |
| 1477. æthiops, C. & E. ... 2821         | 1484. gleditschiæ, Schw. 1792             |
| 1478. obesa, Schw. ... 2818             | 1485. dispar, Fr. ... 4148                |
| = <i>quadrata</i> , Schw.               | 1486. megalospora, Mont. 2739             |
| 1479. toxici, Schw. ... 2826            |   |

## b. subeffusa.

- |   |                                    |
|---|------------------------------------|
| 1487. grandinea, Berk., Grev. xiii. 103 | 1488. gregale, Schw. ... 1469 2847 |
|---|------------------------------------|

\*\*\* *Sporidia triseptata, hyalina.*

- |  |
|--|
| 1489. platyroa, Berk. & Curt., Grev. xiii. 103 |
|--|

\*\*\* *Sporidia triseptata, fusciscentia.*

- |                                 |  |
|---------------------------------|--|
| 1490. vagans, Not. ... 3381     | 1493. homaleum, Fr. ... 3956           |
| = <i>Bulliardii</i> , Tul.      | = <i>omalogramma</i> , Fr. S. S.       |
| 1491. fuscosporum, Schw. 3385   | 1494. Spraguei, Berk. & Curt. ... 3994 |
| 1492. Fuckelii, Nitke. ... 3386 |  |

\*\*\* THYRIDARIA. *Sporidia pluriseptata.*

## a. pustulata.

- |                                   |                                 |
|-----------------------------------|---------------------------------|
| 1495. campylosporum, Fr. 3382     | 1500. delognensis, Speg. 3366   |
| 1496. cylindrosporum, Rab. 3388   | 1501. lateritia, Ellis ... 3368 |
| 1497. Jackii, Rabh. ... 3389      | 1502. pulveracea, Karst. 3369   |
| 1498. meliæ, Curt., Gr. xiii. 103 | 1503. sambuci, Karst. ... 3370  |
| 1499. incrustans, Sacc. ... 3365  | 1504. ailanthi, Rehm. ... 3371  |

## b. subeffusa.

- |                                   |                               |
|-----------------------------------|-------------------------------|
| 1505. rubro-notata, B. ... 3367   | 1507. spiniferum, Wallr. 3383 |
| 1506. myriangioides, B. & R. 3372 |                               |

## ALGÆ BRITANNICÆ RARIORES EXSICCATÆ.

By E. M. HOLMES.

## FASCICULUS II.

This fasciculus, just issued, contains the following species :—

26. *Callithamnion barbatum*, J. Ag.  
Hele, near Ilfracombe, August, 1883, E. M. Holmes.
27. *Calothrix crustacea*, Thur.  
Berwick-on-Tweed, October, 1884, E. Batters.
28. *Castagnea contorta*, Thur.  
Weymouth, September, 1884, E. M. Holmes.

29. *Ceramium divaricatum*, *Crn.*, on *Zostera*.  
Weymouth, October, 1883, K. Holmes.
30. *Chantransia luxurians*, *Thur.*, on *Zostera*.  
Weymouth, August, 1883, E. M. Holmes.
31. *Cladophora arctiuscula*, *Crn.*  
Berwick-on-Tweed, September, 1884, E. M. Holmes.
32. *Cladophora prolifera*, *Kütz.*  
Weymouth, October, 1884, E. M. Holmes.
33. *Codiolum longipes*, *Foslie.*  
Berwick-on-Tweed, July, 1884, E. M. Holmes, and September,  
1884, E. Batters.
34. *Ectocarpus insignis*, *Crn.*, on *Chondriopsis tenuissima*, *J. Ag.*  
Bognor, August, 1884, E. M. Holmes.
35. *Ectocarpus reptans*, *Crn.*, on *Cladophora lætevirens* Harv., and  
*Chætomorpha ærea*, *Kg.*  
Exmouth, June, 1882, and Weymouth, November, 1882, K.  
Appleford.
36. *Ectocarpus terminalis*, *Kütz.*, on *Corallina*.  
Newquay, July, 1884, E. M. Holmes.
37. *Ectocarpus virescens*, *Thur.*  
Weymouth, November, 1883, K. Holmes.
38. *Elachista stellulata*, *Aresch.*, on *Dictyota*.  
Weymouth, August, 1882, E. M. Holmes.
39. *Euthora cristata*, *J. Ag.*, on *Laminaria Cloustoni*, *Le Jol.*  
Berwick-on-Tweed, September, 1882, E. Batters.
40. *Gigartina Teedii*, *J. Ag.*  
Jersey, August, 1883, E. Batters.
41. *Grateloupia dichotoma*, *J. Ag.*  
Newquay, July, 1884, E. M. Holmes.
42. *Lomentaria reflexa*, *J. Ag.* (*Cystocarpa*.)  
Hele, near Ilfracombe, August, 1883, E. M. Holmes.
43. *Phyllitis Fascia*, *Kütz.*  
Elie, July, 1882, and Berwick-on-Tweed, September, 1883,  
E. Batters.
44. *Polysiphonia ceramiformis*, *Crn.*  
Swanage, April, 1884, E. M. Holmes.
45. *Polysiphonia Rhunensis*, *Born.*  
Ilfracombe, August, 1883, E. M. Holmes.
46. *Porphyra leucosticta*, *Thur.*  
Joppa, near Edinburgh, June, 1883, G. W. Traill.
47. *Rivularia parasitica*, *Chavv.*, on *Nemalion multifidum*, *J. Ag.*  
Portland, Weymouth, October, 1884, E. M. Holmes.
48. *Sphacelaria cœspitula*, *Lyngb.*, on *Saccorhiza bulbosa*, *De la Pyl.*  
Berwick-on-Tweed, September, 1883, E. Batters.
49. *Vaucheria dichotoma f. submarina*, *Lyngb.*  
Weymouth, September, 1884, E. M. Holmes.
50. *Vaucheria piloboloides*, *Thur.*  
Weymouth, September, 1884, E. M. Holmes.

## CALIFORNIAN FUNGI.

BY M. C. COOKE, AND DR. H. W. HARKNESS.

(Continued from p. 21.)

**Phoma astragali**, Cks. & Hk.

Caulicola, tecta. Peritheciis depressis semi-immersis, epidermide velatis. Sporulis subfusoides, binucleatis, hyalinis ( $.008 \times .002$  mm.).

On stems of *Astragalus*. (Harkness, 2566.)

**Phoma Lupini**, Cke. & Hk.

Caulicola. Peritheciis gregariis, subcutaneis, subglobosis, atris, epidermide nitida tectis. Sporulis elongato-ellipticis, binucleatis, hyalinis ( $.02 \times .006$  mm.).

On stems of *Lupinus*. (Harkness, 1986.)

**Phoma Polygalæ**, Cke. & Hk.

Caulicola. Peritheciis gregariis, subcutaneis, globoso-depressis, pertusis, epidermide nitida velatis. Sporulis subfusoides, enucleatis, utrinque obtusis, hyalinis ( $.01 \times .0025$  mm.).

On stems of *Polygala*. (Harkness, 2351.)

**Pleosporopsis heteromeles**, Cke. & Hk.

Hypophylla. Peritheciis gregariis, aurantio-fulvis, globoso-depressis, ( $\frac{1}{2}$  mm.) glabris, pulpa pulverulenta flavida. Sporulis globosis, subpellucidis ( $.008$  mm. diam.).

On dead leaves of *Heteromeles*. (Harkness, 1295, 2162.)

**Sphaeropsis quercinum**, Cke. & Hk.

Peritheciis sparsis, subcutaneis, globoso-depressis, vix prominulis. Sporulis subellipticis, continuis, utrinque rotundatis, demum olivaceo-fulgineis ( $.02-.024 \times .012$  mm.).

On living oak branches. (Harkness, 2117.)

**Sphaeropsis lupini**, Cke. & Hk.

Caulicola, sparsa, erumpens. Peritheciis globoso-depressis, atris, demum semi-emergentibus, pertusis. Sporulis globoso-ovoideis, utrinque subacuminatis, continuis, demum atro-olivaceis ( $.015-.017 \times .008-.01$  mm.).

On stems of *Lupinus*. (Harkness, 1989.)

**Harknessia Arctostaphylli**, Cke. & Hk.

Amphigena. Peritheciis innatis, erumpentibus, paululis ( $\frac{1}{2}$  mm.), ore orbiculari elevato, sub-denticulato. Sporulis ellipticis, fulgineis ( $.02 \times .009$  mm.) deorsum pedicellatis, basidiis brevibus.

On leaves of *Arctostaphylus*. (Harkness, 2515.)

**Rhabdospora chlorogali**, Cke. & Hk.

Caulicola, gregaria. Peritheciis atris, punctiformibus, sub-depressis, cuticulâ hyalinâ tectis, demum erumpentibus semi-nudis. Sporulis bacillaribus utrinque obtusis, rectis flexuosisve, hyalinis, obscure nucleatis ( $.03 \times .003$  mm.).

On stems of *Chlorogalum*. (Harkness, 2509.)



**Rhabdospora decorticata**, Cke. & Hk.

Peritheciis erumpenti-superficialibus, subglobosis, atris, papillatis, lævibus, sporulis filiformibus, flexuosis vel curvulis, hyalinis, continuis ( $\cdot 025$  mm. longis.).

On decorticated *Acacia*. (Harkness, 2052.)

**Vermicularia straminis**, Cke. & Hk.

Peritheciis subgregariis, globoso-depressis, atris ( $\frac{1}{3}$  mm. diam.) setis rigidis ( $\cdot 15$  mm. long) sparsis, erectis ornatis. Sporulis cylindraceis, utrinque rotundatis, rectis, continuis, hyalinis ( $\cdot 012 \times \cdot 0035$  mm.).

On straw. (Harkness, No. 2464.)

**Diplodia fuchsiae**, Cke. & Hk.

Caulicola. Peritheciis subcutaneis, gregariis, globosis, atris, epidermide tectis, numquam erumpentibus. Sporulis ellipticis, uniseptatis, nec constrictis, fuscis ( $\cdot 028 \times \cdot 01$  mm.).

On stems of *Fuchsia*. (Harkness, 2366.)

**Diplodia crassulae**, Cke. & Hk.

Caulicola. Peritheciis gregariis, subcutaneis, globosis, atris, demum epidermide fissurato erumpentibus. Sporulis ellipsoideis, uniseptatis, medio vix constrictis, fuscis ( $\cdot 02 - \cdot 022 \times \cdot 008$  mm.).

On stems of *Crassula*. (Harkness, 2173.)

**Diplodia phyllactiniae**, Cke. & Hk.

Epiphylla. Peritheciis gregariis, superficialibus, liberis, globosis (ut in *Erysipheis*). Sporulis ellipticis, uniseptatis, nec constrictis, fuscis ( $\cdot 012 \times \cdot 005$  mm.).

On leaves of *Acacia*, &c. (Harkness, 1992, 2053.)

**Amerosporium geranii**, Cke. & Hk.

Gregarium, erumpens, demum subliberatum. Peritheciis e globosis cupulatis, pilis nigricantibus, tenuibus, dense vestitis. Sporulis curvulis, utrinque attenuatis, continuis, hyalinis ( $\cdot 02 \times \cdot 0035$  mm.).

On stems of *Geranium*. (Harkness, 2424.)

**Hendersonia scirpicola**, Cke. & Hark.

Culmicola. Peritheciis minutis, punctiformibus, atris, semi-immersis, pertusis. Sporulis cylindraceis, utrinque rotundatis, triseptatis, constrictis, fuscis ( $\cdot 02 \times \cdot 005$  mm.).

On culms of *Scirpus*. (Harkness, 2548.)

**Hendersonia varians**, Cke. & Hk.

Caulicola. Peritheciis gregariis erumpentibus, demum semi-nudis, depresso-globosis atris. Sporulis ovalibus, uniseptatis dein bi-vel triseptatis, magnitudine variabilis, brunneis, subopacis ( $\cdot 012 - \cdot 015 \times \cdot 0075$  mm.) nec constrictis.

On stems of *Sphacele*. (Harkness, 2512.)

Allied to *H. diversispora*, but probably distinct.

**Camarosporium ellipticum**, Cke. & Hk.

Caulicolum. Peritheciis gregariis, sub-globosis erumpentibus, mox semi-nudis, atris, pertusis. Sporulis ellipticis 2-4 septatis, loculo uno alterove longitudinaliter divisus, fuscis, nec constrictis, magnitudine variabilis ( $\cdot 01 \times \cdot 007$  ad  $\cdot 018 \times \cdot 0075$  mm.).

On stems of *Mesembryanthemum*. (Harkness, 2237.)

**Leptothyrium juncinum**, *Cke. & Hk.*

Gregarium. Peritheciis scutiformibus atris, opacis, planis demum concavis, orbicularibus. Sporulis cylindraceis obtusis, continuis, hyalino-olivaceis ( $.012 \times .003$  mm.) basidiis brevissimis suffultis.

On *Juncus*. (Harkness, 2568.)

**Leptostroma sequoiae**, *Cke. & Hk.*

Gregarium, superficiale, innatum, hysteriforme, atro-fuscum, nitidum, siccitate centro collapsum. Sporulis sublanceolatis, curvatis, continuis, hyalinis ( $.016 \times .003$  mm.).

On twigs of *Sequaria*. (Harkness, 2265.)

**Trullula (Cesatia) junci**, *Cke. & Hk.*

Acervulis orbicularibus, convexis atris, minutis, erumpentibus; conidiis cylindraceis, vel subfusiformibus, nucleatis, continuis hyalinis, e basidiis brevissimis radiantibus ( $.02-.025 \times .004$  mm.).

On culms of *Juncus*. (Harkness, 2567.)

**Myxosporium microsporum**, *Cke. & Hk.*

Acervulis laxe gregariis, subcutaneo-erumpentibus, transverse-oblongis (vix 1 mm.), conidiis ovoideis, rectis, hyalinis ( $.004 \times .003$  mm.).

On pear tree branches. (Harkness, 1970.)

**Glœosporium carpogenum**, *Cke. & Hk.*

Acervulis innato-erumpentibus, pallidis, ore lacerato; conidiis subellipticis vel clavatis, utrinque rotundatis, hyalinis ( $.018 \times .006-.007$  mm.).

On capsules of cotton wood. (Harkness, 2049.)

**Tubercularia sphaeroidea**, *Cke. & Hk.*

Stromatibus laxe gregariis, erumpentibus, hemisphaericis vel sphaeroideis, atris; conidiis subcylindraceis, utrinque obtusis, rectis vel leniter curvulis, continuis, hyalinis ( $.006-.007 \times .002$  mm.), hyphis tenuibus.

On stems of *Geranium*. (Harkness, 2078.)

**Tubercularia Geranii**, *Cke. & Hk.*

Stromatibus subgregariis, roseis, magnis (plerumque 1 mm. diam.), sub-globoso-erumpentibus, pulverulentibus. Conidiis ellipsoideo-elongatis, obtusis, rectis, hyalinis ( $.008-.009 \times .003$  mm.).

On stems of *Geranium*. (Harkness, 2126.)

**Tubercularia insignis**, *Cke. & Hk.*

Stroma erumpens, pallidum, subglobosum, pulverulentum. Conidiis minutissimis, subellipticis, hyalinis ( $.003 \times .0015$  mm.), hyphis tenuibus, simplicibus, furcatisve congestis.

On twigs of *Pinus insignis*. (Harkness, 2170.)

**Hymenula glumarum**, *Cke. & Hk.*

Stromatibus erumpentibus, convexis mox confluentibus, pallide carneis. Conidiis subglobosis, continuis, hyalinis ( $.0035-.04$  mm. diam.).

On glumes of wheat. (Harkness, 2347.)

**Hymenula Lupini**, Cke. & Hk.

Stromatibus gregariis, punctiformibus, albidis, convexis dein confluentibus, pulverulentibus. Conidiis profusis, ovalibus subgloboisive, hyalinis ( $0.004-0.005 \times 0.003-0.0035$  mm.).

On stems of *Lupinus*. (Harkness, 2963.)

**Hymenula megarrhizæ**, Cke. & Hk.

Stromatibus gregariis, erumpentibus, carneis, convexo-applanatis, siccitate pulverulentibus. Conidiis subellipticis, continuis, hyalinis ( $0.0045-0.005 \times 0.0035$  mm.).

On stems of *Megarrhiza*. (Harkness, 2082.)

**Strumella Vincæ**, Cke. & Hk.

Stromatibus gregariis, erumpentibus, subglobois, sphaeriformibus, atris; basidiis erectis, hyalinis, continuis, crassiusculis, arcte congestis; conidiis ellipticis, continuis, atro-fuscis ( $0.012 \times 0.004$  mm.).

On stems of *Vinca*. (Harkness, 2339.)

**Hymenula phormicola**, Cke. & Hk.

Stromatibus minutis, albidis, in lineas gregariis, convexis vel ellipticis, inter nervulas enatis. Conidiis ellipticis, continuis, hyalinis ( $0.008 \times 0.004$  mm.).

On leaves, &c., of *Phormium*. (Harkness, 2224.)

## PRÆCURSORES AD MONOGRAPHIA POLYPORORUM.

-By M. C. COOKE.

(Continued from p. 87.)

M. **Hispidi**. Anodermei = pileo primo valde spongioso-aquoso dein firmo elastico, facto e fibris validis extrorsum divergentibus et porrectis indeque setoso-hispido, poris cum fibris carnis modo contiguus. Caro vulgo offert stratum intermedium, exteriori hispido minus divergens.

\* *Contextu colorato*.

262 spongia, *Fr. Hym. Eur.* 542.

263 cuticularis, *Bull. Champ.* t. 462.

var. *Herbergii*, *Rost. Poly.* t. 18.

var. *hispidioides*, *Peck 33rd Report* p. 21.

264 fibrillosus, *Karst. Fung. Fenn.* 311.

265 hispidus, *Fr. Hym. Eur.* 551.

266 birretum, *Kalch. Hedw.* xv. 114.

267 hypo-coccineus, *Berk. Hook. Journ.* 1847, 319.

268 macroporus, *Lev. Ann. Sci. Nat.* 1848, 122.

269 fraticum, *B. & Curt. Linn. Journ.* x. 310.

270 cucullatus, *B. & Curt. Grev.* i. 51.

271 rheades, *Pers. Myc. Eur.* ii. 69.

272 unicolor, *Schwein. Syn. Car.* 71.

273 corruscans, *Fr. Hym. Eur.* 551.

274 Hausmanni, *Fr. Hym. Eur.* 552.

\*\* *Contextu albo.*

- 275 symphyton, *Schwein. Syn. Car.* 951.  
 276 undulatus, *Schwein. Syn. Car.* 893.  
 277 Weinmanni, *Fr. Hym. Eur.* 552.  
 278 hispidans, *Berk. Fr. Nova Sym.* 37.  
 279 pelliculosus, *Berk. Hook. Journ.* 1848, vii. 575.  
 280 spiculiferus, *Cke. in Grev. ined.*  
 281 fissilis, *B. & Curt. Grev.* i. 50.  
 282 albo-stygius, *B. & Curt. Fungi Cub.* 223.  
 283 galactinus, *Berk. Hook. Journ.* 1847, 321.  
 284 Junghuhnii, *Fries. Nova Symb.* 40.  
 285 spumeus, *Sow. Fungi*, t. 211.  
 286 borealis, *Fr. Hym. Eur.* 552.  
     *var. montanus, Fr. Hym. Eur.* 553.  
     *var. spathulatus, Fr. Hym. Eur.* 553.  
 287 obtusus, *Berk. Ann. Nat. Hist.* 1839, 390.  
 288 Hobsoni, *Berk. in Herb.* 3,987.  
 289 labyrinthicus, *Schwein. Syn. Car.* 950.  
 290 leucospongia, *Cke. Grev.* xi. 106.  
 291 pubescens, *Fr. Hym. Eur.* 553.  
 292 substuppeus, *B. & Cke. Linn. Journ.* xv. 381.

N. **Suberosi.** Pileo primitus sub-carnoso, succoso, dein indurato, crusta tenuiori tecto, poris tenuibus demum subsecedentibus.—*Fr. Epic.* Nos. 133-143.

\* *Contextu colorato.*

- 293 dryadeus, *Fr. Hym. Eur.* 553.  
 294 rubiginosus, *Rost. Poly.* t. 32.  
 295 resinosus, *Fr. Hym. Eur.* 554.  
 296 benzoinus, *Fr. Hym. Eur.* 554.  
     = *Micheneri*, *Berk. in Herb.*  
     = *morosus*, *Kalchb. Bot. Zeit.* 1870.  
 297 soloniensis, *Fr. Hym. Eur.* 553.  
 298 erubescens, *Fr. Hym. Eur.* 554.  
 299 Afzelii, *Fr. Epicr.* 461.  
 300 helveolus, *Rost. Poly.* t. 35.  
 301 colossus, *Fr. Nova Symb.* 40.  
 302 pilotæ, *Schw. Amer. Bor.* 370.

\*\* *Contextu albo.*

- 303 quercinus, *Schrad. Spic.* 157.  
 304 betulinus, *Fr. Hym. Eur.* 555.  
     = *albellus*, *Peck.*, 30 Report, p. 45.  
 305 leucocreas, *Cke. Grev.* viii. 55.  
 306 palustris, *B. & Curt. Grev.* i. 51.  
 307 officinalis, *Fr. Hym. Eur.* 555.  
 308 flavescens, *Mont. Ann. Sci. Nat.* v. 368.  
 309 portentosus, *Berk. Hook. Journ.* 1844.

- 310 medullaris, *Berk. Hook. Journ.* 1852, 140.  
 311 naucinus, *Fr. Nova Symb.* 41.  
 312 nivosus, *Berk. Hook. Journ.* 1856, 196.  
 313 eucalyptorum, *Fr. Pl. Preuss.* 135.  
 314 elatinus, *Berk. Hook. Journ.* 1852, 140.  
 315 Schulzeri, *Fr. Hym. Eur.* 556.  
 316 paradoxus, *Fr. Hym. Eur.* 555.  
 317 strumosus, *Fr. Epicr.* 462.  
 318 natalensis, *Fr. Natal* 13.  
 319 unguatus, *Berk. Linn. Journ.* xiii. 165.

O. **Lignescens.** Pileus plus minus concentrice sulcato l striato et substantia vegeta quidam molli et succosa tamen coriacea simul unde siccitate contracto et vulgo curvati.

A Fomitibus recedunt vegetatione annua, substantia primitus molli subfibrosa, poris numquam stratosis.

\* *Contextu albo.*

- 320 induratus *B. in Mellis, St. Helena*, 380.  
 321 hypopolius, *Kalch. Grev.* x. 99.  
 322 salignus, *Fr. Hym. Eur.* 544.  
 323 impolitus, *Fr. Nova Symb.* 42.  
 324 cartilagineus, *B. & Br. Ceylon Fungi*, 459.

\*\* *Contextu pallido.*

† *Pileo rugoso zonato.*

- 325 Auferianus, *Mont. Cub. t.* xvi. f. 1.  
 326 zonalis, *Berk. Ann. N. H.* x. 375.  
     = *micromegas*, *Mont. Syll.* 157.  
 327 incurvus, *Cke. Grev.* xiii. 2.  
 328 contractus, *Berk. Hook. Journ.* 1847, 503.  
 329 lignosus, *Klot. Fries Epic.* 471.  
 330 cubensis, *Mont. Syll.* 160.  
 331 havanensis, *B. & C. Linn. Journ.* x. 310.  
 332 Liebmanni, *Fr. Nova Symb.* 43.  
 333 durus, *Jungh. Fl. Java.* 62.  
 334 venezuelæ, *B. & Curt. in Herb.* 2, 694  
 335 Lindigii, *Lev. Ann. Sci. Nat.* 1863, xx. 295.

†† *Pileo lævi.*

- 336 plebius, *Berk. Fl. N. Zeal.* ii. 179.  
 337 testudo, *Berk. Linn. Trans.* 2, ii. 401.  
 338 atypus, *Lev. Ann. Sci. Nat.* 1884, 184.

\*\*\* *Contextu fusco.*

- 339 vulneratus, *Lev. Ann. Sci. Nat.* 1844, 188.  
 340 dorcas, *Berk. Ann. Nat. Hist.* 1862, 195.  
 341 Dozyanus, *Lev. Ann. Sci. Nat.* 1848, 123.  
 342 anebus, *Berk. Hook. Journ.* 1847, 504.

**P. Resupinati.** Anodermeus, mollis, resupinatus, margine tenuiter reflexo. Plerumque Polyporeos in statu imperfectu.

343 pachylus, *Berk. in. Herb.* No. 2861.

344 ascoboloides, *Berk. Linn. Journ.* xiii. 162.

345 diffissus, *Berk. Fl. Nova Zeal.*

GEN. II. **FOMES.** *Fr. Nov. Symb.* 31.

Pileus primitus lignoso-induratus (raro molles, plorantes) contextu floccoso intertexto, crusta rigida obductus, azonus, sed demum concentrice sulcatus.

Fungi perennes (vulgo stratoze) reviviscentes, sed stratum annum vegetum tantum est.

**A. Mesopodes.** Pileus integer, glaber, stipes distinctus, verticalis, simplex.

\* *Stipite glabro, nigricante.*

346 nigripes, *Fr. Epic.* 435.

347 diabolicus, *Berk. Hook. Journ.* 1856, 174.

348 rufoatratus, *Berk. Hook. Journ.* 1856, 174.

349 incrustatus, *Fr. Nova Symb.* 45.

350 rhizomorphus, *Mont. Syll.* 161.

351 hypoplastus, *Berk. Hook. Journ.* 1856, 174.

\*\* *Stipite fusco, pruinoso vel tomentoso.*

352 augustus, *Berk. Hook. Journ.* 1856, 143.

353 rhinocerotis, *Cooke Enum. Polyp.* 150.

354 rudis, *Berk. Ann. Nat. Hist.* iii. 1839, 323.

355 pullatus, *Berk. in Herb.* 2340.

356 rugosus, *Nees. Nova Acta. Cur.* xiii. t. 7.

357 scleropodius, *Lev. Ann. Sci. Nat.* 1846, 123.

358 camerarius, *Berk. Hook. Journ.* 1856, 143.

359 Schomburgkii, *Mont. and Berk. Hook. Journ.* 1844, 331.

360 calcigenus, *Berk. Hook. Journ.* 1843, 636.

361 omphalodes, *Berk. Hook. Journ.* 1866, 172.

362 cassiæcolor, *Berk. Hook. Journ.* 1856, 171.

363 pansus, *Berk. Hook. Journ.* 1856, 169.

364 xylodes, *Berk. Hook. Journ.* 1856, 171.

365 heteromorphus, *Lev. Ann. Sci. Nat.* 1846, 123.

366 procerus, *Berk. Hook. Journ.* 1856, 171.

367 exilis, *Berk. Hook. Journ.* 1856, 173.

\* \* **OCELLATI.**—*Poris contractis ocellatis.*\*

368 ocellatus, *Berk. Hook. Journ.* 1856, 172.

369 pallidus, *Berk. Hook. Journ.* 1856, 176.

370 variabilis, *Berk. Hook. Journ.* 1856, 193.

*var. mesostictus, Berk.*

*var. ellipticus, Berk.*

\* Mouth of the pores contracted to a minute punctiform orifice, hence papillate, with the appearance of very thick dissepiments.

- 371 semiclausus, *Berk. Hook. Journ.* 1856, 193.  
*var. spathularius, Berk.*  
 372 brunneopictus, *Berk. Hook. Journ.* 1856, 176.

B. **Pleuropodes**, *Fr.* Pileus horizontalis hand circinatus, glaber, crustato-laccatus, stipes simplex, adscendens, corticatus vel definite lateralis vel excentricus.

\* *Stipite laccato.*

- 373 amboinensis, *Fr. Epicr.* 442.  
*a lingua, Nees. Acta. Cur.* xiii. t. 3.  
*b japonicus (Fr.), Thunb. Fl. Jap.* t. 39.  
*c cochlear, Nees. Acta. Cur.* xiii. t. 6.  
*d gibbosus, Nees. Acta. Cur.* xiii. t. 5.  
*e pisochapani, Nees. Rumph. Amb.* vi. t. 576.  
*f fornicatus, Fr. Epicr.* 443.  
 374 lucidus, *Fr. Epicr.* 442.  
 375 Curtisii, *Berk. Hook. Journ.* 101.  
 376 nutans, *Fr. Nova Symb.* 45.  
 377 longipes, *Lev. Ann. Sci. Nat.* 1846, 125.  
 378 umbraculum, *Fr. Epicr.* 435.

\*\* *Stipite pruinoso vel velutino.*

- 379 dealbatus, *B. & C. Grev.* i. 39.  
 380 polydactylus, *Berk. Hook. Journ.* 1856, 196.  
 381 superpositus, *Berk. Linn. Journ.* xiii. 161.  
 382 deformis, *Schæff. Icon.* t. 264.  
 383 languidus, *Fr. Fungi Guin.*  
 384 obsoletus, *Fr. Epicr.* 54.  
 385 atropurpureus, *Berk. Hook. Journ.* 1856, 194.  
 386 macer, *Berk. Hook. Journ.* 1856, 176.  
 387 hemibaphus, *Berk. Hook. Journ.* 1856, 193.  
 388 placopus, *Lev. Ann. Sci. Nat.* 1846, 124.  
 389 mastoporus, *Lev. Ann. Sci. Nat.* 1844, 182.  
 390 testaceus, *Lev. Ann. Sci. Nat.* 1846, 126.  
 391 opacus, *Mont. & Berk. in Mont. Syll.* 161.  
 392 auriscalpium, *Pers. Gaud. Voy.* 169.  
 393 pudens, *Berk. Hook. Journ.* 1852, 138.  
 394 Glaziovii, *Berk. in Warm. Symb.* 1879, p. 34.  
 395 regulicolor, *Berk. in Herb.* No. 2420.

\* \* \* *incertæ sedis.*

- 396 corrugis, *Fr. Hym. Eur.* 536.  
 397 hirtus (*Quel.*), *Fr. Hym. Eur.* 536.

C. **Merismoides**, *Fr.* E truncò tuberculove communi explicantur pileoli numerosissimi persistente tenaci, contextu floccoso submolli fomentario, poris adnatis=Merisma suberosi, *Fr. Ep.* 451.

- 398 graveolens, *Schwein. Syn. Car.* 904.  
 399 senex (*Nees*), *Mont. Syll.* 160.  
 = *rhabarbarinus*, *Berk.*

- 400 crassus, *Fr. Hym. Eur.* 543.  
 401 fuliginosus, *Fr. Hym. Eur.* 543.  
 402 anthracophilus, *Cooke Grev.* xii. 16.  
 403 cornubovis, *Cooke Grev.* xiii. 2.

D. **Fomentarii.** Pileo floccoso-fomentario, primitus exsucco, haud carnosus spongiosus, crusta dura cornea tecto, poris demum stratosis.

\* *Contextu albo, albidove.*

- 404 scansilis, *Berk. Linn. Journ.* xvi. 53.  
 405 enteroleucus, *Fr. Epic.* 468.  
 406 volvatus, *Peck, 27 Report,* 98.  
 407 ulmarius, *Fr. Hym. Eur.* 562.  
 408 cytisinus, *Berk. Eng. Fl.* v. 142.  
 409 hornodermus, *Mont. Ann. Sci. Nat.* 1856, 368.  
 410 geotropus, *Cke. Grev.* xiii. 32.  
 411 ligneus, *Berk. Ann. Nat. Hist.* 1839, 387.

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### NOTICE.

Pages 49 to 110 of Appendix, containing descriptions of British Hymenomycetes, in continuation from the preceding volume, will, in binding, be placed at the end, or may be kept as a separate work. They are, in effect, the letterpress to the plates contained in Vols. I. and II. of "Illustrations of British Fungi." Further instalments, in continuation, for Vols. III. and IV., will be proceeded with immediately.

# Grevillea,

A QUARTERLY RECORD OF  
CRYPTOGAMIC BOTANY  
AND ITS LITERATURE.

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EDITED BY M. C. COOKE, M.A., A.L.S.,

*Author of "Handbook of British Fungi," "Fungi, their uses." &c.,  
"Rust, Smut, Mildew, and Mould," &c., &c.*

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A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY  
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## NEW BRITISH FUNGI.

By M. C. COOKE.

(Continued from Vol. XIII., p. 100.)

### **Agaricus (Hypholoma) oedipus, Cooke.**

Pileus glutinous, fleshy in the centre, membranaceous at the margin, at first turbinate or hemispherical, with a ragged margin (which separates from the inferior, very visible, and slightly darker evanescent ring), then convex, with an even margin, smooth, dull, hygrophanous, disc umber, becoming pallid at the margin, which extends slightly beyond the gills. Stem rather thick, enlarging downwards to a bulbous base, solid, fibrillose below, pruinose above the median ring. Gills at first whitish, becoming umber, adnate by their entire breadth, sometimes with a minute decurrent tooth, plane, with a somewhat granular margin. Spores dark brown.—*Cooke Illus. ined.*

Attached to decayed sticks or dead leaves. Clehanger, Feb., 1872. (*J. Renny & Dr. Bull.*)

At present the only British representative of the "Viscid" section of *Hypholoma*. Pileus  $\frac{1}{2}$  to 1 inch diam. Stem 2 inches long, 2-3 lines thick, nearly white.

### **Agaricus (Hypholoma) canofaciens, Cooke.**

Gregarious. Pileus campanulate, then expanded, scarcely umbonate, but with a fleshy disc, even, dark bay brown, ferruginous at the apex, clad everywhere, as well as the stem, with delicate scattered white hairs, which are soon evanescent at the apex; veil white, fibrillose, at first attached to the margin of the pileus. Stem of the same colour as the pileus, nearly equal, stuffed, very dark at the base; flesh of the pileus pallid, of the stem rufescent, gradually darker downwards. Gills very broad, adnate, ventricose, dark umber.—*Cooke Illus. ined.* Ag. areolatus., *Smith, in Mus. Britt.*

On rotten straw. Stoke Newington, May 1876. (*W. G. Smith.*)

Pileus about  $1\frac{1}{2}$  inch diam. Stem 3 inch long, 3-4 lines thick. Spores elliptical, irregular in size  $\cdot 012\text{--}\cdot 017 \times \cdot 008$  mm.

***Æcidium Convallariæ*, Schum. Saell. II., 22.**

Hypophyllous. Spots greenish yellow, cups crowded in orbicular clusters, mostly concentrically disposed, pale yellow, cup-shaped, somewhat immersed; mouth toothed, at length entire. Spores pale yellow.

On lily of the valley. Bowness Lake, Windermere, June, 1884. (*T. Hebdén.*)

***Æcidium Pimpinellæ*, Kirch. var. *Apti.***

On leaves and petioles of wild celery, *Apium graveolens*, near Hull. (*T. Dennis.*)

***Phoma Loti*, Cooke.**

Gregarious. Perithecia globose, black, covered by the elevated cuticle, which is soon pierced by the prominent ostiola. Sporules elliptical, hyaline, enucleate ( $\cdot 005 \times \cdot 002$  mm.), without apparent, or very short, sporophores.

On small twigs of *Diospyros lotus*. Kew.

***Phoma viventis*, Cooke.**

Gregarious. Perithecia punctiform or slightly elongated, minute, black, covered by the shining discoloured cuticle, which is at length cracked longitudinally. Sporules subfusiform, obtuse at the ends, enucleate, hyaline ( $\cdot 006\text{--}\cdot 007 \times \cdot 0025$  mm.).

On living twigs of *Lonicera*. Kew.

***Phoma staphyleæ*, Cooke.**

Gregarious. Perithecia punctiform, covered by the cuticle, which is at length blackened, rather prominent, seldom exposed. Sporules elliptical, continuous, enucleate ( $\cdot 005\text{--}\cdot 008 \times \cdot 003\text{--}\cdot 004$  mm.), with no distinct sporophores.

On thin twigs of *Staphylea pennata*, *S. trifoliata*, and *S. colchici*. Kew.

***Phoma opulifolia*, Cooke.**

Gregarious. Perithecia punctiform, depressedly globose, covered by the discoloured cuticle, which is slightly elevated. Sporules narrowly lanceolate, continuous, binucleate ( $\cdot 01 \times \cdot 0025$  mm.), shortly stipitate.

On twigs of *Spiræa opulifolia*. Pleasure grounds, Kew.

It differs from British specimens of *P. sorbariæ* on the same plant in not being deeply immersed in the bark, in the perithecia being smaller, and in the sporules being longer and narrower.

***Phoma jasmini*, Cooke.**

Perithecia scattered, covered by the cuticle, prominent, black, subglobose, much larger than in *Phoma domestica*, and more prominent. Sporules subfusiform, binucleate ( $\cdot 009\text{--}\cdot 01 \times \cdot 003$  mm.), on short sporophores.

On *Jasminum officinale*. Kew.

Sometimes associated with *P. domestica*.

***Phoma crassipes*, Cooke.**

Erumpent, somewhat scattered. Perithecia rather large, black, opaque, subglobose, at length with the upper half exposed. Sporules oval, continuous, hyaline, without nuclei ( $\cdot 006 \times \cdot 004$

mm.), on thick sporophores, which are three times as long as the sporules and about half their diameter.

On small twigs of *Broussonetia papyrifera*. Kew.

**Phoma rhodora**, Cooke.

Spots apical or marginal, large, irregular, brown. Perithecia gregarious, minute, punctiform, black, immersed, scarcely visible to the naked eye. Sporules numerous, very minute, subelliptical, hyaline ( $\cdot 004\text{--}\cdot 005 \times \cdot 002$  mm.), on short sporophores.

On living leaves of *Rhododendron*. Kew.

Perhaps the spermogonia of *Sph. (Læstadia) rhodora*.

**Phoma polygonorum**, Cooke.

Loosely gregarious. Perithecia minute, punctiform, covered by the cuticle, which is soon pierced by the minute ostiola. Sporules narrowly elliptical, continuous, hyaline, without distinct nuclei ( $\cdot 012 \times \cdot 003$  mm.).

On stems of *Polygonum cuspidatum*. Kew.

**Phoma cistina**, Cooke.

Densely gregarious, subcutaneous, elevating and sometimes throwing off the outer layer of the bark. Perithecia subglobose, black, collapsed when dry; ostiolum sometimes short, and just piercing the cuticle, sometimes 2 or 3 times as long as the diameter of the perithecia, and flexuous. Sporules subcylindrical or fusoid, obtuse at the end, usually with two small nuclei, hyaline ( $\cdot 006\text{--}\cdot 007 \times \cdot 0025$  mm.). Sporophores about twice as long as the sporules.

On branches of *Cistus laurifolius*. Kew.

There is a circumscribing black line in the wood where the perithecia are adnate, or partially immersed, but in these instances all the perithecia were exoete. Little doubt can exist of these being really a *Diaporthe*, but no ascigerous fruit has yet been seen.

**Phoma Barbari**, Cooke.

Perithecia loosely gregarious, covered by the epidermis, convex, not erumpent, at length pierced. Sporules oval, binucleate, hyaline ( $\cdot 005 \times \cdot 003$  mm.).

On branches of *Lycium barbarum*. Kew.

**Phoma celtidis**, Cooke.

Perithecia prominent, convex, loosely gregarious, covered by the cuticle, piercing it with its black punctiform ostiolum. Sporules oval, without nuclei, hyaline ( $\cdot 005 \times \cdot 0035$  mm.).

On slender twigs of *Celtis occidentalis*.

There is another *Phoma*, on thicker branches, which we have met with, once or twice, with fusiform binucleate sporules ( $\cdot 01 \times \cdot 003$ ), but we have not sufficient material to warrant a description.

**Phoma rubella**, Cooke.

Perithecia collected on indeterminate red spots, semi-immersed, somewhat depressed, black, scarcely papillate. Sporules narrowly elliptical, without nuclei, continuous, hyaline ( $\cdot 007 \times \cdot 002$  mm.).

On dead stems of *Umbelliferae*. Kew.



**Phoma aromatica**, Cooke.

Perithecia gregarious, covered by the slightly convex cuticle, depressed, rather minute, scarcely papillate. Sporules sub lanceolate, continuous, with two nuclei, hyaline ( $\cdot 008\text{--}\cdot 01 \times \cdot 003\text{--}\cdot 0035$  mm.) on short sporophores.

On twigs of *Calycanthus occidentalis*. Kew.

This is clearly not the *Phoma calycanthi*, Schw.

**Phoma Elæagnella**, Cooke.

Scattered or subgregarious, minute, covered by the convex cuticle. Perithecia depressedly globose, black. Sporules oval, profuse, continuous, hyaline, without nuclei ( $\cdot 005 \times \cdot 0025$  mm.), without distinct sporophores.

On branches of *Elæagnus*. Kew.

**Cytispora Staphyleæ**, Cooke.

Stroma flattened, with two or threecells, covered by the slightly raised epidermis, which opens by a small elevated white-margined pore. Sporules linear, curved, obtuse (allantoid) hyaline ( $\cdot 006 \times \cdot 001$  mm.).

On branches of *Staphylea pennata* and *S. trifoliata*. Pleasure grounds, Kew.

**Cytispora Jasmini**, Cooke.

Stroma rather conical, subcutaneous, small, covered by the darkened cuticle, very loosely gregarious. Sporules linear, curved, obtuse (allantoid),  $\cdot 006 \times \cdot 001$  mm. Oozing from a small orifice in the cuticle.

On thin twigs of *Jasminum officinale*. Pleasure grounds, Kew.

**Cytispora Euonymi**, Cooke.

Gregarious, pseudo-perithecia conical, covered by the darkened cuticle, rather small, at length blackish and shining. Sporules allantoid, curved, hyaline ( $\cdot 008 \times \cdot 002$  mm.), issuing in pallid tendrils.

On small twigs of *Euonymus americanus*. Kew.

**Cryptosporium Hippocastani**, Cke.

Stroma cortical, covered, splitting the bark, and confluent longitudinally, pallid, conidia oblong fusiform, continuous, without nuclei, rather obtuse ( $\cdot 018\text{--}\cdot 02 \times \cdot 005$ ). Oozing out and forming a whitish farinaceous margin to the fissures. Sporophores simple, or forked, twice as long as the conidia.

On branches of *Æsculus hippocastanum*. Kew.

Closely allied to *C. coronatum*, Fekl.

**Sphæropsis Betulæ**, Cooke.

Sub-gregarious, sometimes scattered, concealed beneath the elevated cuticle. Perithecia depressedly globose, scarcely papillate. Sporules elliptical, rounded at the ends, continuous, yellowish ( $\cdot 03\text{--}\cdot 032 \times \cdot 009$  mm.).

On twigs of *Betula alba*. Kew.

**Diplodia cistina**, Cooke.

Gregarious, deeply seated, covered and concealed by the bark. Perithecia rather conical, black, often in lines, or small clusters,

only seen when the outer layers of the bark are peeled off. Sporules elliptical, uniseptate, not constricted, brown ( $\cdot 016\text{--}022 \times \cdot 009\text{--}01$  mm.).

On stems and branches of *Cistus laurifolius*. Pleasure grounds, Kew.

**Hendersonia Tamaricis**, Cooke.

Perithecia loosely gregarious, covered by the elevated cuticle, subglobose, scarcely papillate. Sporules elliptical, slightly attenuated at each extremity, triseptate, not constricted, clear brown ( $\cdot 018\text{--}02 \times \cdot 007$  mm.).

On branches of *Tamarix gallica*. Kew.

var. **Elæagni**, Cooke.

Perithecia rather smaller, and more closely gregarious. Sporules the same.

On branches of *Elæagnus*. Kew.

This form differs so little from that on *Tamarix*, that it can have no claim to be considered a distinct species.

**Hendersonia ambiens**, Cooke.

Gregarious, covered by the elevated cuticle, which is at length perforated, globose, shortly papillate. Sporules narrowly elliptical, triseptate, not constricted, clear brown ( $\cdot 02 \times \cdot 007\text{--}008$  mm.). At first with sporophores of equal length.

On branches of *Acer dasycarpum*. Kew.

**Camarosporium Staphyleæ**, Cooke.

Scattered, covered by the bark, and concealed. Perithecia black, globoso-depressed, rarely slightly elevating the cuticle. Sporules elliptical, triseptate, one or other of the central cells transversely divided, not constricted, clear brown ( $\cdot 018\text{--}02 \times \cdot 008$  mm.).

On branches of *Staphylea pennata* and *S. trifoliata*. Kew.

What appears to be a variety of the same species occurs on slender twigs of *Celtis*.

**Camarosporium cistinum**, Cooke.

Gregarious, seated on the inner bark. Perithecia globose, black, with a conical ostiolum, which perforates the covering layer of bark, sometimes forming irregular lines. Sporules elliptical, elongated, triseptate, not constricted at the septum, with sometimes (but not constantly) one of the central cells divided longitudinally, brown ( $\cdot 015\text{--}018 \times \cdot 005\text{--}007$  mm.).

On branches of *Cistus laurifolius*. Kew.

**Coryneum cistinum**, Cooke.

Stroma pulvinate, orbicular, convex, black, seated in the inner bark, somewhat gregarious, covered and wholly concealed by the outer bark, and only exposed when this falls away; conidia lanceolate, obtuse at the ends, triseptate, but not constricted, clear brown ( $\cdot 05\text{--}055 \times \cdot 015\text{--}018$  mm.); pedicels hyaline, about the same length as the conidia, at length deciduous.

On branches of *Cistus laurifolius*. Kew.

MILOWIA. *Massee*.

Pulvinate, monococious. Mycelium sparsely septate, branched, flexuous, giving origin to numerous lateral fertile three-celled branches. Pollinodium clavate, springing from the basal cell of the fertile branch. Carpogonium formed from the terminal cell of the fertile branch, broadly obovate, producing from near its apex from two to five cylindrical octosporous asci.

**Milowia nivea**, *Massee*, in *Roy. Micr. Journ.* 1884, p. 841, pl. XII.

Tufts globose, minute, white; sporidia colourless, cylindrical, truncate; conidia globose, moniliform, occupying the same position as the carpogonium when the latter is not developed.

Forming snow-white spots on decaying leaves of *Blymus compressus*.

(The question which suggests itself in connection with this fungus is, as to the nature of the naked clavate bodies termed asci, viz., whether they are merely more completely developed hyphæ with dissilient joints, as in *Sporochisma*, or asci, as in *Ascomyces*, —ED.)

**Rhinotrichum decipiens**, *Cooke*.

Broadly effused, resembling some species of *Corticium*, at first of a pale rose-pink colour, growing pallid when old, somewhat velvety, with a thin radiating margin, often separable from the matrix. Sterile threads creeping, branched, septate, densely interwoven; fertile branches rather short, more closely septate, erect, clavate, the ultimate one or two joints covered with short acute spicules. Spores ovate, attached by the small extremity to the spicules,  $\cdot 022\text{--}\cdot 025 \times \cdot 014\text{--}\cdot 015$  mm.

Overrunning bark and mosses. Carlisle, Feb., 1884. (*Dr. Carlyle*.)

It becomes quite firm and like a *Corticium* when dry. Easily mistaken for *Peniophora velutina*.

**Peziza (Tarzetta) petaloidea**, *Cke. & Phil.*

Stem rooting, attenuated downwards, cups lobate, expanded and flattened, externally verrucose, fuliginous-brown, disc yellowish-brown, rugose ( $\frac{1}{2}$ – $\frac{3}{4}$  inch diam.). Asci cylindrical. Sporidia eight, elliptical ( $\cdot 015 \times \cdot 008$  mm.), rough; paraphyses linear. *Peziza cupularis*, var. in *Herb. Berk.*

On the ground. East Bergholt, Feb., 1852.

A most distinct species, probably an inch in diameter when living. The above description taken from the dried specimens.

**Patellaria subtectum**, *Cke & Phil.*

Singly or in clusters, appearing first as black conical points emerging through the layers of bark, in which condition no fructification is seen; at length the conical points expand into lens-shaped, or Lecidea-like discs, which are immarginate and black, about 1 mm. broad or less, substance soft and fragile. Asci broadly clavate, narrowed into a slender stem. Sporidia 8, oblongo-elliptical, with 3–4 nuclei, at length 1–3 septate ( $\cdot 02\text{--}\cdot 024 \times \cdot 005\text{--}\cdot 006$

mm.); paraphyses filiform, slender. Stylospores in the same hymenium, elongated, cylindrical, with 5-8 nuclei, curved, on short sporophores seated amongst the asci ( $\cdot 03\text{--}\cdot 05 \times \cdot 005$  mm.).

On inner bark of *Cistus laurifolius*. Kew.

**Valsa (Cryptospora), Betulæ, Tul. Sacc. Syll. 4124.**

Pustules orbicular, immersed; perithecia 8-10, circinating, globose; disc scarcely emergent, conical, ostiola punctiform, rather prominent. Asci cylindrical-clavate, attenuated below. Sporidia linear, obtuse at the ends, arcuate, continuous, hyaline ( $\cdot 035\text{--}\cdot 038 \times \cdot 0035\text{--}\cdot 005$  mm.).

On branches of *Betula*. Kew pleasure grounds. Near Bristol. (*C. Bucknall*). Sphæriacei Brittanici. (*Plowright*.)

Although found in Britain for some years, the description appears to have been omitted.

**Valsa (Chorostate) Robergeana, Desm. Sacc. Syll. 2388.**

Corticolous, immersed, minute. Perithecia 6-15, covered by the adnate epidermis, crowded in an irregular circle, black, at first globose, then collapsing and concave. Ostiola convergent, cylindrical, erumpent. Asci somewhat fusiform, sporidia eight, biserial, somewhat elliptical, uniseptate or biguttulate, hyaline ( $\cdot 015 \times \cdot 005$  mm.).

On *Staphylea pennata*. Pleasure grounds, Kew.

What appears to be another species has been met with but once, with fusiform, acute, narrow, quadri-nucleate sporidia, about  $\cdot 014 \times \cdot 003$  mm., which can hardly be any form of the present.

**Diaporthe viridaril, Sacc. Syll. 2568.**

Stroma broadly effused, immersed in the bark or wood of the branches, circumscribed by a flexuous line. Perithecia rather large, globose, then depressed; neck very short; ostiola rather thick and obtuse. Asci somewhat fusiform. Sporidia ovate-fusiform ( $\cdot 015\text{--}\cdot 016 \times \cdot 005$  mm.), uniseptate, constricted, obtuse at the ends, with 4 nuclei, hyaline.

On slender twigs of *Prunus lauro-cerasus*. Kew.

**Sphæria (Didymella) sphingiphora, Oudem. Diaporthe sphingiphora, Sacc. Syll. 2414.**

Perithecia scattered, nestling beneath the epidermis, at length erumpent, furnished with a short neck perforated with a round pore. Asci oblong, with eight spores. Sporidia biserial, oblong, obtuse at the ends, straight or slightly curved, uniseptate, hyaline ( $\cdot 017 \times \cdot 005$  mm.).

On small twigs of *Cornus alba*. Kew.

This species and *Sphæria salicella*, Fr., cannot with any reason be included in *Valsa* or *Diaporthe*.

**Hypocrea dacrymycella Cke & Pl. Grev. xii. 100.**

By some error this species was described again by Mr. Plowright (Grev. xiii. p. 79), under the name of *Hypocrea viscidula*.

## CALIFORNIAN FUNGI.

By M. C. COOKE AND W. H. HARKNESS.

(Continued from Vol. XIII., p. 114.)

**Diplodia lupini**, Cke. & Hark.

Caulicola. Peritheciis sparsis, tectis, depresso-globosis, vix papillatis. Sporulis ellipticis, uniseptatis, nec constrictis, fuscis, ( $0.028 \times 0.01$  mm.).

On stems of *Lupinus*. (Harkness, 2247.)

In company with *Diaporthe lupini*, Hark.

**Uromyces punctato-striatum**, Cke. & Hark.

Acerulis bullatis, difformibus.

Uredospores. Sporis globosis, lævibus, castaneo-fuscis ( $0.025$  mm. diam.).

Teleutospores. Sporis oblongis, utrinque acuminatis, pallide fuscis. Episorio tenui longitudinaliter punctato, striato, striis reticulato-anastomosantibus ( $0.04 \times 0.02$  mm.).

On twigs of *Rhus*. (Harkness, 2479.)

**Dothidea (Flowerightia) calystegiae**, Cke. & Hk.

Subgregaria, stromatibus ellipticis, erumpentibus, atris, opacis ( $1.2 \times \frac{1}{2}$  mm.), cellulis immersis, epidermide ruptâ cinctis. Ascis clavatis, octosporis vel tetrasporis. Sporidiis elongato-ellipticis, inordinatis, uniseptatis, nec constrictis, hyalinis ( $0.022 \times 0.007$  mm.). Conidiis ovalibus, continuis ( $0.005 \times 0.003$  mm.), pallidis consociatis.

On stems of *Calystegia sepium*. (Harkness, 2477.)

**Valsa lupini**, Cke. & Hk.

Acerulis gregariis, erumpentibus. Peritheciis (4-8) subglobosis, atris, in cæspitulis subconicis congestis, ostiolis convergentibus, minutis. Ascis clavatis, deorsum longe attenuatis, octosporis. Sporidiis allantoideis, subrectis, hyalinis ( $0.007 \times 0.002$  mm.).

On stems of *Lupinus*. (Harkness, 1990.)

**Valsa lavateræ**, Cke. & Hk.

Acerulis gregariis, in ligno nigrificato immersis, epidermide tectis. Peritheciis (3-6) subglobosis, atris, ostiolis elongatis, cylindraceis, tenuibus, emergentibus. Ascis clavatis, octosporis. Sporidiis allantoideis, hyalinis ( $0.008 \times 0.002$  mm.).

On stems of *Lavatera assurgentifolia*. (Harkness, 2361.)

**Diaporthe geranii**, Cke. & Hk.

Peritheciis gregariis, in cortice immersis, saepe nigro-limitatis, subglobosis, atris, initio tectis, dein rimoso fissuratis, ostiolis brevibus, emergentibus. Ascis clavatis. Sporidiis lanceolatis, quadrinucleatis, hyalinis ( $0.015 \times 0.004$  mm.).

On stems of *Geranium*. (Harkness, 2429.)

**Diaporthe elephantina**, Cke. & Hk.

Pustulis valsæformibus, rarissime dispersis. Peritheciis in cortice immersis vel ligno adnatis, globosis, atris, ostiolis tenuis, elongatis, flexuosis, cylindraceis, emergentibus. Ascis clavatis, octosporis.

Sporidiis lanceolatis, quadrinucleatis mox uniseptatis, hyalinis ( $\cdot 012 \times \cdot 0035$  mm.).

On stems of *Geranium*. (Harkness, 2499, 2130.)

***Diaporthe immutabilis*, Cke. & Hk.**

Stromate varie effuso interruptoque, caulis superficiem vix decolorato, linea nigra infra, in ligno, limitato; peritheciis sparsis globosis, ostiolis brevibus punctiformibus. Ascis clavatis, octosporis. Sporidiis sublanceolatis, biserialibus, rectis curvulisve 2-4 nucleatis, uniseptatis, hyalinis ( $\cdot 012\text{--}\cdot 014 \times \cdot 004$  mm.).

On stems of *Scrophularia*. (Harkness, 2463.)

***Physalospora geranii*, Cke. & Hark.**

Peritheciis densissime gregariis, convexis, atris, epidermide velatis, demum erumpentibus. Ascis clavatis, amplis, octosporis. Sporidiis ellipticis, biserialibus, continuis, intus granulosis, hyalinis ( $\cdot 025\text{--}\cdot 028 \times \cdot 01$  mm.).

On stems of *Geranium*. (Harkness, 2129.)

***Sphaerella (Læstadia) caryophyllea*, Cke. & Hk.**

Peritheciis minutis, punctiformibus, densissime gregariis, athermis, convexis, emergentibus. Ascis obclavatis, octosporis. Sporidiis obtuse lanceolatis, biserialibus, continuis, hyalinis ( $\cdot 02 \times \cdot 0075$  mm.).

On stems of *Dianthus*. (Harkness, 2183.)

***Sphaerella xanthicola*, Cke. & Hark.**

Peritheciis punctiformibus, prominulis, atris, in maculas ellipticas congestis, initio epidermide tenui velatis. Ascis obclavatis, sessilibus, octosporis. Sporidiis ellipticis, uniseptatis, vix constrictis, utrinque rotundatis, hyalinis ( $\cdot 012\text{--}\cdot 015 \times \cdot 005\text{--}\cdot 006$  mm.).

On stems of *Xanthium*. (Harkness, 2451.)

***Didymella megarrhizæ*, Cke. & Hk.**

Gregaria. Peritheciis subconicis, atris, parvulis, nitidis, initio velatis, demum ostiolo acuto erumpentibus. Ascis cylindrico-clavatis, octosporis, sporidiis ellipticis, uniseptatis, medio constrictis, rectis, hyalinis ( $\cdot 016\text{--}\cdot 018 \times \cdot 007$  mm.).

On stems of *Megarrhiza*. (Harkness, 2086.)

***Didymella fuchsiae*, Cke. & Hk.**

Sparsa vel subgregaria. Peritheciis globoso-depressis, atris, epidermide tectis, ostiolo conico prominulo emergente. Ascis cylindrico-clavatis, octosporis. Sporidiis biserialibus, rectis curvulisve, uniseptatis, nec constrictis, binucleatis, hyalinis ( $\cdot 015 \times \cdot 005$  mm.).

On stems of *Fuchsia*. (Harkness, 2374.)

***Amphisphaeria dothideaspora*, Cke. & Hk.**

Gregaria. Peritheciis emergentibus, epidermide nigrofacta obtectis, conico-convexis, nitidis, ostiolo papillato. Ascis subclavatis, octosporis. Sporidiis subellipticis, inæqualiter uniseptatis, constrictis, fuliginis ( $\cdot 02 \times \cdot 012$  mm.).

On stems of *Mimulus*. (Harkness, 2217, 2508.)

**Leptosphaeria straminis**, Cke & Hk.

Culmicola. Peritheciis sparsis vel subgregariis, in maculos effusos nigrofactos insidentibus, erumpentibus, atris, convexis, pertusis. Ascis cylindrico-clavatis, octosporis. Sporidiis lanceolatis quinqueseptatis, leniter constrictis, fuscis, loculis binis centralibus longitudinaliter divisus ( $\cdot 032\text{--}\cdot 035 \times \cdot 006\text{--}\cdot 008$  mm.).

On culms of straw. (Harkness, 2337, 2376, 2408.)

**Leptosphaeria subcæspitosa**, Cke. & Hk.

Erumpens. Peritheciis subglobosis, atris, subcæspitosis, 4-8 in cæspitulis congestis, vel in lineas elongatos dispositis. Ostioli cylindricis, elongatis, emergentibus. Ascis clavatis, octosporis. Sporidiis lanceolatis, medio constrictis, quinqueseptatis, fuscis ( $\cdot 035\text{--}\cdot 038 \times \cdot 007$  mm.).

On stems of *Geranium*. (Harkness, 2128.)

**Leptosphaeria phormicola**, Cke & Hk.

Gregaria. Peritheciis punctiformibus, erumpentibus, epidermide tectis, dein fissurato-emergentibus, atris, convexulis, papillatis. Ascis clavatis, octosporis. Sporidiis sublanceolatis, utrinque rotundatis, biserialibus, triseptatis, vix constrictis, pallide fuscis ( $\cdot 022 \times \cdot 006$  mm.).

On *Phormium*. (Harkness, 2231, 2457.)

**Pleospora quadrisepata**, Cke. & Hk.

Peritheciis subgregariis, convexis, atris, nitidis, initio epidermide velatis, parvulis. Ascis clavatis, octosporis. Sporidiis subellipticis, distichis, quadrisepatis, vix constrictis, cellulis uno alterove longitudinaliter divisis, brunneis ( $\cdot 02\text{--}\cdot 022 \times \cdot 008$  mm.).

On pods of gillyflower. (Harkness, 2184.)

**Hysterographium (Glioniopsis) insignis**, Cke. & Hk.

Peritheciis gregariis, erumpentibus, ovalibus vel ellipticis ( $\frac{1}{2}$ -1 mm. long) atris, subnitidis, labiis arcte conniventibus. Ascis clavatis, octosporis. Sporidiis lanceolatis, utrinque acuminatis, medio constrictis, 5-7 septatis, muriformibus, hyalinis ( $\cdot 02 \times \cdot 01$  mm.).

On wood of *Acacia*. (Harkness, 2382.)

**Phacidium arbuti**, Cke. & Hk.

Receptaculis emergentibus, demum subsuperficialibus, applanatis, atris, discoideis, quadratis, triangulis, vel difformibus ( $\frac{1}{4}$ - $\frac{1}{2}$  mm.), margine obtuse dentato. Ascis clavatis, octosporis. Sporidiis biserialibus, elliptico-lanceolatis, continuis, hyalinis ( $\cdot 012\text{--}\cdot 014 \times \cdot 005$  mm.).

On leaves of *Arbutus Menziesii*. (Harkness, 2122.)

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JOURNAL OF THE QUEKETT MICROSCOPICAL CLUB.—We are requested to announce that this Journal will in future be published by Messrs. Williams and Norgate, Henrietta Street, the publishers of "Grevillea."

## SOME EXOTIC FUNGI.

By M. C. COOKE.

## AUSTRALASIA.

**Fomes (Fometarii) pyrrhocreas, Cooke.**

Durus, effusus, centro affixus, margine reflexo, arcte pileiformi, sulcato-zonato, glabro, brunneo, crusta dura tecto; contextu aurantio-rubro; hymenio pallido, marginato. Tubulis brevibus stratosi, poris minutissimis, rotundis, æqualibus ( $\frac{1}{4}$  mm.) dissepimentis crassiusculis.

On logs. New Guinea. (Capt. Armit.)

Allied to *P. Kermes* B., from which it differs in the smooth brown pileus, and smaller pores, as well as in the hard crust of the pileus. Apparently commonly resupinate with the margin reflexed and forming a narrow pileus of about  $\frac{1}{2}$  an inch in depth,  $\frac{1}{4}$  inch thick, and 3 inches long.

**Aleurodiscus tabacinus, Cooke.**

Erumpens, cupulæformis, gregarius. Pileo subelliptico (2-3 mm. long), rugoso, crispulo, brunneo, tomentoso, margine crassiusculo dilutiori, connivente, pilis rectis, subrigidis (circa .1 mm. long), basidiis clavato-cylindricis, guttulatis. Sporis ellipticis, continuis, granulatis ( $.025-.028 \times .01$  mm.).

On naked wood. Moona, New South Wales. (Crawford.)

Whether the genus, as described, be a good one or not, the present is evidently congeneric with the species hitherto associated under it. Perhaps the large clavate bodies in the hymenium may not be asci, but basidia. The species should be examined carefully when living.

**Hymenochaete olivaceum, Cooke.**

Effusum, atro-olivaceum, rugosum, velutinum, margine albido fibroso adnato circumdatum. Setis cylindrico-clavatis, scabrosis, deorsum profunde attenuatis, pallidis, contextu dense fibroso, intertexto.

On dead branches. Toorvoomba, Australia.

Resembling *Hym. umbrinum* B., but very different in colour, thinner, and with a distinct pale fibrous margin.

**Mesophellia scleroderma, Cooke.**

Peridio duro, suberoso, ochraceo, globoso-depresso ( $1\frac{1}{2}$ -2 in. diam.), extus ad apicem in areolas rhomboideas fissurato, intus olivaceo, centro vacuo. Sporis ellipticis, subhyalinis ( $.01 \times .004$  mm.), capillitio obsoleto.

On the ground. New Zealand. (Reader, 50.)

**Uredo Anguillaræ, Cooke.**

Amphigea, soris gregariis, ellipticis, bullatis, din epidermide tectis, sporis globosis, vel globoso-ovalibus, lævibus, fuscis, episporio tenui ( $.02-.022 \times .02$  mm.), pedicellis brevibus, hyalinis, deciduis.

On leaves of *Anguillaria dioica*. Guntawang, Upper Macquarie River, Australia. (Hamilton, No. 9.)



**Uromyces microtidis**, Cooke.

Amphigenum. Soris gregariis, sub-hemisphaericis, atro-fuscis, epidermide cinctis. Sporis ovalibus, verrucoso-asperatis, hyalino-apiculatis, fuscis ( $\cdot 03 \times \cdot 016$  mm., apiculo inclusis), pedicellis brevissimis, deciduis.

On leaves of *Microtis porrifolia*. Bulladulah, N. S. Wales.

**Zignoia subcorticalis**, Cooke.

Sparsa. Peritheciis semi-immersis, pertusis, atris, opacis. Ascis cylindricis, octosporis. Sporidiis ellipticis, hyalinis, continuis ( $\cdot 012 \times \cdot 004$  mm.).

Inside dead bark of trees. Australia.

**Sphaerella trichomanes**, Cooke.

Sparsa vel subcaespitosa. Peritheciis semi-immersis, punctiformibus, atris, cuticulâ tenui primo tectis, punctato-pertusis. Ascis clavatis ( $\cdot 03 \times \cdot 005$  mm.), ostosporis. Sporidiis cylindricis, utrinque rotundatis, uniseptatis, hyalinis ( $\cdot 008 \times \cdot 002$  mm.).

On living fronds of *Trichomanes*. Samoa.

## SOUTHERN ASIA.

**Panus aureo-fulvus**, Cooke.

Pileo carnoso, subcoriaceo, sessili, flabelliformi, multifido, velutino, aureo-fulvo; lamellis ad basim subdiscoideam decurrentibus, confertissimis, tenuissimis, angustis, concoloribus.

On logs. Perak, 1893.

Similar in size and general appearance to *Ag. anthocephalus*, Lev., but differs in the densely velvety pileus.

**Lentinus brevipes**, Cooke.

Pileo carnoso-coriaceo, tenui, infundibuliformi, pallido, fuscomaculato, glabrescente, margine sublobato, undulato, striatulo; stipite brevi, deorsum attenuato, ochroleuco, subvelutino, vel subsquamoso; lamellis decurrentibus, furcatis, latinsculis, vix confertis, interstitiis subtomentosis, pallidis.

On logs. Perak, 4,342.

Pileus 3 in. in diam. Stem 1 in. long,  $\frac{1}{2}$ - $\frac{3}{4}$  in. thick

**Polyporus (Petaloides) cochleariformis**, Cooke.

Pileo carnoso-lento, spatulato; velutino, glabrescente (siccio fuligineo) postice in stipitem elongatem attenuato, margine acuto demum lobato-fissurato; stipite subaquali cylindrico, quandoque connato, velutino, umbrino, ad basim discoideo; hymenio pallido poris rotundis, aequalibus, mox laceratis confluentibusque ( $\frac{1}{4}$  mm. diam.) dissepimentis tenuibus.

On logs. Perak, 2821.

Pileus 1 in. broad,  $1\frac{1}{2}$  in. long. Stem  $1\frac{1}{2}$ -2 in. long, 3 millimetres thick, sometimes caespitose.

**Polystictus (Discipes) rigescens**, Cooke.

Pileo carnoso-molli, tenui, demum rigido, contracto, flabelliformi, saepe sublobato, zonato, purpureo-fusco, glabro, stereiformi, pos-

tice attenuato discoideo-affixi, margine acutissimo, flexuoso Hymenio albedo. Poris minutissimis, sub lente vix conspicuis, æqualibus, rotundatis ( $\frac{1}{10}$  mm.) dissepimentis tenuibus.

On rotting logs. Perak, 4818.

Allied to *P. thelephoroides*, Hook, but not so thin, darker coloured, discoid at the base, and with much smaller pores.

Pileus 2-3 in. broad and long, thin, contracted and contorted in drying.

**Polystictus (Discipes) Malaiensis, Cooke.**

Pileo coriaceo, tenui, flabelliformi, lobato, vinoso-fusco, zonato, sericeo-nitido, margine acuto; stipite brevi, disciformi, hymenio umbrino. Poris rotundis, æqualibus ( $\frac{1}{8}$  mm.) dissepimentis tenuisculis, quandoque laceratis, contextu rhabarbarino.

On logs. Perak, 5398.

Pileus 3 in. or more long. Stem scarcely exceeding half an inch, often less. Allied to *P. discipes*, B.

**Asterina concentrica, Cooke.**

Maculis atrofuscis, orbicularibus vel confluentibus. Perithecii minutis, applanatis, concentrice dispositis, margine radiante, ascis clavatis, octosporis. Sporidiis ellipticis, continuis (?) hyalinis, ( $0.008 \times 0.003$  mm.) valde immaturis.

On culms of *Saccharum*. N.W. India.

**Asterina crustacea, Cooke.**

Amphigena, crustacea, atra; perithecii applanatis, in maculas orbicularibus confluentibus; margine radiato-fimbriato, arcte adnato; ascis obovato-pyriformibus, octosporis. Sporidiis ellipticis, uniseptatis, medio constrictis, fuscis ( $0.032-0.015 \times 0.016-0.018$  mm.).

On dead leaves of *Rhododendron*.

Mount Malabar 4000-7000 feet. Java. (Dr. Th. Anderson.)

SOUTH AFRICA.

**Æcidium Loranthe, Cooke.**

Gregarium, amphigenum. Peridiis emergentibus, elongatis, cylindræis; ore lacerato; sporis angulariter subglobosis, aurantiacis ( $0.02$  mm. diam.).

On leaves of *Loranthus*. Botanic Garden, Durban. (J. M. Wood, No. 830.)

Cells of the peridium oblong, very irregular in size and outline about  $0.03 \times 0.02$  mm.

NORTH AMERICA.

**Radulum concentricum, Che. & Ellis.**

Late effusum, crustaceum, glabrum, lutescens, tuberculis inæqualibus, elongatis, subteretibus, aliis conicis, aliis spathulatis, aliisque confluentibus, plus minusve concentricis, plerumque ambitu abbreviatis, subvenosis.

On logs. Oregon. (J. B. Ellis.).

**Cytispora smilacis, Cooke.**

Stromatibus pustulatis, gregariis, convexis, innato-erumpentibus, pauci-ocularibus, sporulis minutissimis, cylindricis, vix curvulis hyalinis ( $\cdot 004 \times \cdot 002$  mm.) sterigmatibus duplo longioribus.

On exposed roots of *Smilax*. Darien, Georgia. (Ravenal, 3175.)

**Hysterium (Gloniella) syconophilum, Cooke.**

Peritheciis gregariis, lanceolatis, rectis vel flexuosis, atris, emergentibus, rimula longitudinali angusta notatis, ascis subclavatis, octosporis; sporidiis sublanceolatis, multinucleatis, demum quinque-septatis, hyalinis ( $\cdot 036\text{--}\cdot 04 \times \cdot 008\text{--}\cdot 01$  mm.).

On living bark of *Ficus carica*. S. Carolina. (Ravenal, 4074.)

**Allographum arundinarum, Cooke.**

Peritheciis erumpentibus, demum superficialibus, gregariis, linearibus, rectis, plerumque longitudinaliter confluentibus, labiis arcuatis, atris subnitidis (1-2 mm. long). Ascis pyriformibus, octosporis; sporidiis subellipticis, deorsum attenuatis, uniseptatis, nec constrictis, hyalinis ( $\cdot 013\text{--}\cdot 015 \times \cdot 005$  mm.).

On culms of *Arundinaria*. Darien, Georgia. (Ravenal, 3223.)

## SYNOPSIS PYRENOMYCETUM.

(Continued from Vol. XIII, p. 109.)

**1508. Diatrype verruciformis, Ehr.**

To this species may probably be referred *Diatrypella affinis*, Cooke, with elongated or confluent pustules on *Sambucus*; and also *Diatrypella subglobata*, Cooke and Gerard. On *Robinia* in the United States.

**1604. Diatrype berberidis, Cooke.**

Stromatibus verruciformibus, innato-erumpentibus, oblongis vel confluentibus, scabris, atris, ligno affixis; peritheciis minimis, numerosis. Ascis clavato-stipitatis, octosporis. Sporidiis allantoideis in parte sporifera stipatis, hyalinis ( $\cdot 014 \times \cdot 002$  mm.).

On branches of *Berberis vulgaris*. Near Bristol (C. Bucknall).

**1626. Hillea ferruginea, Karst. Myc. Fenn. 20, 195.**

We fail to see either the reason or the authority for altering this to *Sillia*. Sacc. Syll. II., 361.

**1652. Valsaria actidia, Berk & Rav. in Herb. Berk.**

Stromatibus innato-emergentibus, peritheciis magnis, paucis (4-6), ostiolis cuneiformibus, stellato-dispositis. Ascis amplis (tetrasporis?). Sporidiis ellipticis, uniseptatis, constrictis, fuscis ( $\cdot 04\text{--}\cdot 042 \times \cdot 016\text{--}\cdot 018$  mm.).

On branches of *Ostrya* and *Carpinus*. S. Carolina (Rav. 2331, 2425).

**Fam. 5. DIATRYPEÆ.** Compositæ. Perithecia in stromate heterogeneum immersa.

**GEN. 1. DIATRYPE, Fries.** Stroma erumpenti-subsuperficiale, effusum, disciforme, vel subverruciforme.

\* **DIATRYPELLA. Not.** Asci polyspori. Sporidia allantoidea, hyalina.

1508. verruciformis, <i>Ehr.</i> 743	1522. minuta, <i>Ntke.</i> ... 757
= <i>affinis</i> , <i>Cooke.</i>	1523. melaleuca, <i>Kze.</i> ... 758
= <i>subglobata</i> , <i>Cke. &amp; Ger.</i>	1524. quercina, <i>P.</i> ... 759
1509. favacea, <i>Fr.</i> ... 744	1525. opaca, <i>Cke.</i> ... 760
1510. nigroannulata, <i>Grev.</i> 745	1526. discoidea, <i>C. &amp; Pk.</i> 761
= <i>angulata</i> , <i>Fr.</i> ...	1527. olivacea, <i>C. &amp; Ellis</i> 762
1511. circumvallata, <i>Nees.</i> 746	1528. irregularis, <i>C. &amp; Ellis</i> 763
1512. Tocciaëana, <i>Not.</i> ... 747	1529. subfulva, <i>B. &amp; Curt.</i> 764
1513. protrusa, <i>Pr.</i> ... 748	1530. Frostii, <i>Peck.</i> ... 765
1514. decorata, <i>Ntke.</i> ... 749	1531. betulina, <i>Peck.</i> ... 766
1515. exigua, <i>Wint.</i> ... 750	1532. melasperma, <i>Fr.</i> ... 767
1516. pulvinata, <i>Ntke.</i> ... 751	1533. Liriodendri, <i>Schw.</i> 768
1517. intermedia, <i>Karst.</i> 752	1534. cephalanthi, <i>Schw.</i> 769
1518. aspera, <i>Fr.</i> ... 753	1535. melaena, <i>Ntke.</i> ... 770
1519. sordida, <i>P.</i> ... 754	1536. deusta, <i>Ellis &amp; M.</i> 5911
1520. laevigata, <i>Fckl.</i> ... 755	1537. placenta, <i>Rehm.</i> ... 5912
1521. eutypoides, <i>Nsl.</i> ... 756	1538. prominens, <i>Howe...</i> 5913

\*\* **DIATRYPE. Fries.** Asci octospori, sporidia allantoidea, hyalina.

a. *Stictosphaeria.* Stroma effusum.

1539. stigma, <i>Hoffm.</i> ... 705	1544. concolor, <i>Schw.</i> ... 4142
1540. platystoma, <i>Schw.</i> 707	1545. afflata, <i>Schw.</i> ... 1502
1541. hypoxylodes, <i>Not.</i> 708	1546. discostoma, <i>Cke.</i> ... 730
1542. leucocreas, <i>Mont.</i> ... 719	1547. subaffixa, <i>Schwz.</i> ... 1545
1543. tenuissima, <i>Cke.</i> ... 729	

b. *Discosphaeria.* Stroma disciforme vel sub-verruciforme.

1548. disciformis, <i>Hoffm.</i> 703	1561. collariata, <i>C. &amp; E.</i> 716
1549. albopruinosa, <i>Schw.</i> 4143	1562. capensis, <i>K. &amp; Cke.</i> 717
1550. euphorea, <i>Schw.</i> ... 4131	1563. caminata, <i>K. &amp; Cke.</i> 718
1551. virescens, <i>Schw.</i> ... 4134	1564. consobrina, <i>Mont.</i> 720
1552. bullata, <i>Hoffm.</i> ... 704	1565. Macowaniana, <i>Thum.</i> 721
1553. rimosa, <i>Fckl.</i> ... 706	1566. laurina, <i>Rehm.</i> ... 722
1554. macrothecia, <i>Speg.</i> 709	1567. ruficarnis, <i>B. &amp; C.</i> 723
1555. asterostoma, <i>B. &amp; C.</i> 710	1568. russodes, <i>B. &amp; Br.</i> 724
1556. hystrix, <i>Fr.</i> ... 711	1569. polycocca, <i>Fckl.</i> ... 725
1557. fibritecta, <i>C. &amp; Ellis</i> 712	1570. plagia, <i>B. &amp; C.</i> ... 726
1558. aurantii, <i>Not.</i> ... 713	1571. orthosticha, <i>Mont.</i> 727
1559. corniculata, <i>Ehr.</i> ... 714	1572. theloides, <i>B. &amp; Br.</i> 728
1560. chlorosarca, <i>B. &amp; Br.</i> 715	1573. brassicæ, <i>Cke., Grev.</i>

xiii., 100.



- |  |   |
|--|---|
| 1630. <i>denigrans</i> , <i>Curr.</i> ... 1148                 | 1635. <i>adusta</i> , <i>Cke. &amp; Ell.</i> 1142     |
| 1631. <i>atrofusca</i> , <i>B. &amp; Curt., Grev.</i> xii., 51 | 1636. <i>amplispora</i> , <i>Cke., Grev.</i> xii., 51 |
| 1632. <i>insidiosa</i> , <i>Cr.</i> ... 1139                   | 1637. <i>Auerswaldii</i> , <i>Nsl.</i> ... 1138       |
| 1633. <i>linosperma</i> , <i>Mont.</i> 1132                    | 1638. <i>amœna</i> , <i>Ntke.</i> ... 1145            |
| 1634. <i>teniospora</i> , <i>Sacc.</i> ... 1130                | 1639. <i>aceris</i> , <i>C. &amp; Ellis</i> 1423      |

\*\*\*\*\* *Valsaria*. Sporidia uniseptata, fusca.

- |   |  |
|---|--|
| 1640. <i>insitiva</i> , <i>Ces.</i> ... 2807    | 1647. <i>Farlowiana</i> , <i>Sacc.</i> ... 2824            |
| 1641. <i>cincta</i> , <i>Curr.</i> ... 2809     | 1648. <i>moroides</i> , <i>Cke. &amp; Pk.</i> 2839         |
| 1642. <i>syconophila</i> , <i>Schulz.</i> 2811  | 1649. <i>lophiostoma</i> , <i>Hazz.</i> 2841               |
| 1643. <i>viticola</i> , <i>Schw.</i> ... 2812   | 1650. <i>actidia</i> , <i>B. &amp; Rav., Grev.</i> xiv. 14 |
| 1644. <i>diospyri</i> , <i>Schw.</i> ... 2813   |  |
| 1645. <i>anthostomoides</i> , <i>Sacc.</i> 2817 | 1651. <i>Robinia</i> , <i>Schw.</i> ... 4133               |
| 1646. <i>angularis</i> , <i>Peck.</i> ... 2820  |  |

## PRÆCURSORES AD MONOGRAPHIA POLYPORORUM.

BY M. C. COOKE.

(Continued from p. 119.)

\*\* *Contextu pallido, lignicolori.*

- 412 *pinicola*, *Fr. Hym. Eur.* 561.  
 413 *marginatus*, *Fr. Hym. Eur.* 561.  
 414 *pini-canadensis*, *Schw. Amer. Bor.* 410.  
 415 *rufopallidus*, *Fr. Hym. Eur.* 561.  
 416 *gelsorum*, *Fr. Hym. Eur.* 563.  
 417 *rugulosus*, *Lev. Ann. Sci. Nat.* 1844, 188.  
     = *monochrous*, *Mont.*  
 418 *glabrescens*, *Berk. Ann. Nat. Hist.* 1839.  
 419 *Steveni*, *Lev. Demid. Voy.* II. 91 t. 2.  
 420 *dochmius*, *B. & Br. Linn. Journ.* xiv. 50.  
 421 *cinnamomeus* (*Trog*) *Fr. Hym. Eur.* 561.  
 422 *squalidus*, *Fr. Epic.* 469.  
 423 *scabrosus*, (*P.*) *Fr. Epic.* 469.  
 424 *Thomsoni*, *Berk. Hook Journ.* 1852, 142.  
 425 *cupreus*, *Fr. Novæ. Symb.* 48.  
 426 *polytropus*, *B. & Br. Linn. Journ.* xiv. 49.  
 427 *perpusillus* (*P.*) *Ann. Sci. Nat.* 1844, 191.  
 428 *introstoppeus*, *B. & C. Grev.* xiii. 2.  
 429 *sulcatus*, *Cke. Grev.* xiii. 32.

\* *Contextu badio-fulvove.*

- 430 *sclerodes*, *Berk. Linn. Journ.* x. 311.  
 431 *mangiferæ*, *Lev. Ann. Sci. Nat.* 1846, 129.

- 432 fastuosus, *Lev. Ann. Sci. Nat.* 1846, 134.  
 433 sordidus, *Lev. Ann. Sci. Nat.* 1844, 192.  
 434 trachodes, *Lev. Ann. Sci. Nat.* 1844, 192.  
 435 extensus, *Lev. Ann. Sci. Nat.* 1846, 129.  
 436 elatus, *Lev. Ann. Sci. Nat.* 1846, 129.  
 437 punctatus, *Jungh. Fl. Java*, 64.  
 438 multiplicatus, *Mont. Syll.* 156.  
 439 ochrolaccatus, *Mont. Ann. Sci. Nat.* 1842.  
 440 leucophæus, *Mont. Syll.* 157.  
 441 galegensis, *Mont. Syll.* 158.  
 442 conchatus, *Fr. Hym. Eur.* 560.  
 443 lobatus, *Schw. Amer. Bor.* 409.  
 444 scalaris, *Berk. Hook. Journ.* vii. 236.  
 445 sclerodermus, *Lev. Ann. Sci. Nat.* 1846, 129.  
 446 megaloma, *Lev. Ann. Sci. Nat.* 1846, 128.  
 447 rhodophæus, *Lev. Ann. Sci. Nat.* 1844, 190.  
 448 Inzengæ (Not.), *Fr. Hym. Eur.* 557.  
 449 mirus, *Kalch. Bullet. Mosc.* 1877.  
 450 badius, *Berk., in Herb.*  
     \*\* *Contextu umbrino v. fusco-purpureo.*  
 451 australis, *Fr. Hym. Eur.* 556.  
 452 chilensis, *Fr. Nov. Sym.* 47.  
 453 applanatus, *Fr. Hym. Eur.* 557.  
 454 nitens, *Fr. Epicr.* 463.  
 455 pediformis, *Fr. Epicr.* 463.  
 456 orbiformis, *Fr. Epicr.* 463.  
 457 nigro-laccatus, *Cke. Grev.* ix. 97.  
 458 endophæus, *Berk. Hook. Journ.* 1852, 142.  
 459 CErstedtii, *Fr. Nova Symb.* 47.  
 460 atro-umbrinus, *Berk. Hook. Journ.* 1856, 199.  
 461 mortuosus, *Fr. Nova Symb.* 48.  
 462 subflexibilis, *B. & C. Linn. Journ.* x. 311.  
 463 verruculosus (Mey.) *Fr. Epic.* 464.  
 464 vegetus, *Fr. Hym. Eur.* 556.  
 465 peguanus, *Mont. Syll.* 158.  
     \*\*\* *Contextu ferrugineo.*  
 466 fomentarius, *Linn. Suec. No.* 1252.  
 467 excavatus, *Berk. Ann. Nat. Hist.* 1839, 387.  
 468 nigricans, *Fr. Hym. Eur.* 558.  
 469 igniarius, *Fr. Hym. Eur.* 559.  
 470 marmoratus, *Berk. & Curt.*  
 471 zealandicus, *Cke. Grev.* viii. p. 55.  
 472 rimosus, *Berk. Hook. Journ.* 1845, 54.  
 473 roburneus, *Fr. Hym. Eur.* 557.  
 474 fulvus, *Fr. Hym. Eur.* 559.  
     (= *Novæ-Angliæ*, *B. & C. Grev.* i. 51.)  
 475 loniceræ, *Weinm. Syll.* 102.  
     *var. euonymi, Kalch.*

- 476 *tropicus*, *Jungh. Fl. Java*, 63.  
 477 *scleromyces*, *B. & C. Linn. Journ.* x. 312.  
 478 *rhytipleus*, *Mont. Sci. Nat.* v. 369.  
 479 *gryphæformis*, *Berk. Hook. Journ.* 1845, 54.  
 480 *leprosus*, *Fr. Epic.* 464.  
 481 *glaucotus*, *Cke. Grev.* ix. 13.  
 482 *ribis*, *Fr. Hym. Eur.* 560.  
 483 *fusco-purpureus*, *Boud. Bull. Soc. Fr.* 1881, 92.  
     = *rubriporus*, *Quelet*.  
 484 *salicinus*, *Fr. Hym. Eur.* 560.  
 485 *Korthalsii*, *Lev. Ann. Sci. Nat.* 1846, 133.  
 486 *albo-marginatus*, *Zipp. Ann. Sci. Nat.* 1844, 191.  
 487 *aruensis*, *Berk. Linn. Journ.* xvi. 43.  
 488 ? *focalis*, *Kälch. Grev.* x. 54.

\*\*\* *Contextu flavo v. olivaceo.*

- 489 *endothejus*, *Berk. Linn. Journ.* xvi. 46.  
 490 *subolivaceus*, *B. & C. Linn. Journ.* x. 313.

\*\*\*\* *Contextu rubro.*

- 491 *crocitinctus*, *B. & C. Linn. Journ.* x. 311.  
 492 *kermes*, *B. & Br. Linn. Journ.* xiv. 49.  
 493 *pyrrhocreas*, *Cke. Grev.* xiv. 11.  
 494 *lateritius*, *Cke. Grev.* ix. 12.  
 495 *Demidoffii*, *Lev. Demid. Voy.* ii. 93.  
 496 *roseus*, *A. & S. Fr. Hym. Eur.* 562.

**E. *Impoliti*.** Pileus dimidiatus, lignosus, perennis, primitus anodermeus, floccosus l. pruinosis, dein indurato-incrustatus, a substantia ipsa rigente. Contextus fibroso-radians, descendens in poros stipatos elongatos non stratosos.

\* *Contextu pallido.*

- 497 *Martius*, *Berk. Hook. Journ.* 1856, 198.  
 498 *hemileucus*, *B. & Curt. Linn. Journ.* x. 312.  
 499 *exotephrus*, *Berk. Linn. Journ.* xvi. 49.  
 500 *contrarius*, *B. & Curt. in Herb. Berk.* 2634.

\*\* *Contextu fulvo cinnamomeo.*

- 501 *tasmanicus*, *Berk. Fl. Tasm.* ii. 254.  
 502 *Fullageri*, *Berk. Linn. Journ.* xvi. 54.  
 503 *inamænus*, *Mont. Ann. Sci. Nat.* 1842, 22.  
 504 *auriformis*, *Mont. Syll.* 160.  
 505 *sarcitus*, *Fr. Nova. Symb.* 50.  
 506 *capucinus*, *Mont. Ann. Sci. Nat.* v. 369.  
 507 *heteroporus*, *Mont. Syll.* 156.  
 508 *rufo-flavus*, *B. & C. Linn. Journ.* x. 310.  
 509 *pullus*, *Mont. Syll.* 157.  
 510 *pusiolus*, *Ces. Fungi Borneensis*.  
 511 *scutellatus*, *Schw. Amer. Bor.* 387.



\*\*\* Contextu rhabarbarino vel ferrugineo.

- 512 holosclerus, *Berk. Hook. Journ.* 1856, 200.  
 513 spadiceus, *Berk. Ann. Nat. Hist.* 1839, 388.  
 514 caryophylleus, *Cke. Grev.*  
 515 inflexibilis, *Berk. Hook. Journ.* 1856, 199.  
     = *recurvus*, Berk.  
 516 pectinatus (Klot.), *Fr. Hym. Eur.* 559.  
 517 linteus, *Berk. U.S. Exp. Ex.* No. 96.  
 518 calvescens, *Berk. Ann. Nat. Hist.* 1839, 390.  
 519 caliginosus, *Berk. Linn. Journ.* xvi. 46.  
 520 rubiginosus, *Berk. Ann. Nat. Hist.* iii. 324.  
 521 loricatus, *Pers. Myc. Eur.* ii. 86.  
 522 substygius, *B. & Br. Ceylon Fungi* No. 463.

\*\*\* Contextu umbrino.

- 523 nicaraguensis, *B. & Curt. Proc. Am. Acad.* iv. 122.  
 524 Gourliæi, *Berk. Fl. Tasm.* ii. 253.  
 525 endopalus, *Berk. Linn. Journ.* xiii. 163.  
 526 calcitratus, *B. & Curt. Linn. Journ.* x. 314.  
 527 strigatus, *Berk. Hook. Journ.* 1847, 502.  
 528 Curreyi, *Berk. in Herb. Berk.*  
     = *xerophyllaceus*, Currey.

\*\*\* Contextu atroviolaceo.

- 529 melanoporus, *Mont. Cuba* 422.

\*\*\* Contextu ignotæ.

- 530 ponderosus, *Kalch. Grev.* x. 99.

**F. Lævigati.** Pileus dimidiatus, lignosus (etiam primitus aridus quo a Lignescensibus supra differt) cuticula tenui, lævigata (non discreta heterogenea) tectus subpolitus (junior vero saepe flocculosus). Pori stipati, non stratosi, contextus floccoso-fibrillosus, pallidior.—*Lignosi*, *Fr. Epic.* 470.

\* Contextu albo v. albido.

- 531 connatus, *Fr. Hym. Eur.* 563.  
 532 Neesii, *Fr. Hym. Eur.* 564.  
 533 annosus, *Fr. Hym. Eur.* 564.  
     = *scoticus*, Klot.  
 534 populinus, *Fr. Hym. Eur.* 564.  
 535 castaneus, *Fr. Hym. Eur.* 564.  
 536 ægerita, *Fr. Nova Symb.* 55.  
 537 microporus, *Fr. Epic.* 472.  
 538 nubilus, *Fr. Epic.* 471.  
 539 cingulatus, *Berk. Hook. Journ.* 1854, 164.  
 540 Thwaitesii, *Berk. Hook. Journ.* 1854, 228.

\*\* *Contextu pallido.*

- 541 fraxineus, *Fr. Hym. Eur.* 563.  
     = *fraxinophilus*, Peck. Bot. Gaz. 1872, 43.  
 542 hemitephrus, *Berk. Fl. N. Zeal.* ii. 179.  
 543 variegatus (*Secr.*), *Fr. Hym. Eur.* 563.  
 544 fasciatus, *Fr. Epic.* 470.  
 545 semitostus, *Berk. Hook. Journ.* 1852, 143.  
 546 ferreus, *Berk. Hook. Journ.* 1847, 502.  
 547 concentricus, *Cke. Grev.* ix. 13.  
 548 lævissimus, *Fr. Epic.* 470.  
 549 Kamphœveni, *Fr. Nova Symb.* 53.  
 550 scopulosus, *Berk. Hook. Journ.* 1852, 143.  
 551 sanguinarius (*Klot.*), *Fr. Epicr.* 471.  
 552 oblinitus, *Berk. in Herb. Kewensis.*

\*\*\* *Contextu carneo.*

- 553 carneus, *Nees. Nova Acta.* xiii. t. 3.  
 554 coccineus, *Fr. Nova Symb.* 51.  
     = *pandani*, *Fr. Epic.* 469?

\*\*\* *Contextu umbrino.*

- 555 cinereo-fuscus, *Curr. Linn. Trans.* 1876, 124.  
 556 placodes, *Kalch. Grev.* iv. 73.  
 557 tostus, *Berk. Hook. Journ.* 1844, 189.  
 558 semi-laccatus, *Berk. in Herb.*  
 559 arenosus, *Cke. Grev.* xiii. 2.  
 560 sepiater, *Cke. Grev.* ix. 100.

\*\*\* *Contextu rhabarbarino v. ferrugineo.*

- 561 adamantinus, *Berk. Hook. Journ.* 1852, 141.  
 562 omalopilus, *Mont. Cub.* 423.  
     = *carneo-fulvus*, Berk.  
 563 Palliseri, *Berk. in Herb. Berk. No.* 2562.  
     = *Trametes arcticus*, Berk. No. 3044.  
 564 supinus, *Fr. Epic.* 471.  
     = *Valenzuelianus*, *Mont. Cub.* t. 15 f. 4.  
 565 incrassatus, *Berk. Linn. Journ.* xvi. 41.  
     = *reniformis*, *Morg. Bot. Gaz.* 1882, 136.

G. **Resupinati.** Pileus resupinatus vel margine reflexo.

- 566 cryptarum (*Bull.*), *Fr. Hym. Eur.* 566.  
 567 tropicalis, *Cke. Grev.* xiii. 32.  
 568 obliquus, *Fr. Hym. Eur.* 570.  
 569 luridus, *Kalch. Grev.* x. 103.  
 570 bistratosus, *B. & Cke. Linn. Journ.* xv. 384.  
 571 acupunctatus, *B. & Br. Linn. Journ.* xiv. 52.  
 572 bicolor, *Jungh. Fl. Java* 54.

### MUSCOLOGIA GALLICA.

Mons. T. Husnot is publishing a work under the above title in Royal octavo, to be completed in 10 parts, at five francs each. The letterpress consists of 32 pages in each part, and is accompanied by eight or ten plates, so that the entire work will contain some 320 pages of printing, and from 80 to 100 plates. The latter are in the style, and remind one of Wilson's "Bryologia," although not so neat and clear in execution, exhibiting, in fact, just the difference between plate-printing and lithography. Nevertheless there can be no just complaint when the price is taken into consideration, and we doubt not British Bryologists will find it very useful during the period which must elapse before the completion of Dr. Braithwaite's more elaborate work, which, by the way, we should be glad to see at shorter and less uncertain intervals.

### WOOLHOPE FUNGUS FORAY.

The Woolhope Fungus Week commences this year on Monday, Oct. 5th, and the Club day is fixed for Thursday, Oct. 8th. Preceding this, on Friday and Saturday, Oct. 2nd and 3rd, the Essex Field Club hold their annual Fungus Excursions in Epping Forest.

FUNGI MORICOLÆ, DI A. N. BERLESE. PART I.—This is decidedly in advance of the mycological works which have been published in Italy for many years, in its illustrations; and ten large octavo plates, in colour, with letterpress, cannot be considered at all unreasonable at five francs. We note the improvement with pleasure, and recommend the work to our readers, in the assurance that it will give satisfaction. The present part includes figures of 16 Ascomycetes, 3 Sphærospidei, and 1 Hymenomycete.

BRITISH FRESH WATER ALGÆ.—Messrs. Watson and Sons, of No. 313, High Holborn, are issuing a series of 24 microscopical slides, illustrating the most important genera of British Fresh Water Algæ, for the use of students, as a help to the beginner in this interesting branch of biology. Of course they are only a selection from the 120 genera, but even a selection will be found useful as a commencement, and nothing more was possible within the essential limits of number and price. It is confidently hoped that time will prove them well and permanently prepared, as well as carefully selected.

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## BRITISH SPHÆROPSIDÆÆ.

PROVISIONAL LIST OF SPECIES HITHERTO FOUND IN THE BRITISH ISLANDS.

By M. C. COOKE.

In the following catalogue the arrangement is based on the third volume of Saccardo's "Sylloge," with slight modifications as to the grouping. It includes all the species known to us, which have been discovered in Britain since the publication of the "Handbook."

SPHÆROPSIDÆÆ, *Lev.*

Sporules (*Stylospores* and *Spermatia* of authors) without asci, produced on more or less manifest basidia, or sporophores, enclosed within a perithecium.

Fam. 1. SPHÆRIOIDÆÆ, *Sacc.*

Perithecia membranaceous, carbonaceous, or somewhat coriaceous (not fleshy or brightly coloured) globose, conical, or lenticular, entire, immersed or superficial.

## Sub.-Fam. I. PHOMOIDÆÆ.

Perithecia scattered, submembranaceous or carbonaceous, naked, usually papillate, not rostellate, opening by a pore. Sporules hyaline (rarely slightly coloured), for the most part continuous. Growing mostly on dead parts of plants.

GEN. 1. PHOMA, *Fries, Sacc. Syll.* III., 65.

Perithecia subcutaneous, then erumpent, submembranaceous, subcoriaceous, or subcarbonaceous, globose or compressed, smooth, erostrate, with a minute ostiolum, which is sometimes obsolete. Sporules ovoid, fusoid, cylindrical, rarely sphæroid, continuous, hyaline, often biguttulate. Basidia filiform, sometimes very short or obsolete, simple, rarely furcate.

## 1. On woody Dicotyledons.

## A: RAMICOLÆÆ.

1. **Phoma coluteæ**, *Sacc. Syll.* 385.  
On *Colutea arborescens*. Kew; Dalston.
2. **Phoma coronillæ**, *West. Sacc. Syll.* 386.  
On *Coronilla emerus*, and *Baccharis halamifolia*. Kew.
3. **Phoma sophoræ**, *Sacc. Syll.* 389.  
On *Sophora japonica*. Kew.
4. **Phoma sarothamni**, *Cooke. Sacc. Syll.* 391.  
On *Sarothamnus*. Swanscombe.
5. **Phoma amorphae**, *Sacc. Syll.* 393.  
On *Amorpha fruticosa*. Kew.

6. **Phoma herminieræ**, Cooke. *Grev.* XIII., 93.  
On *Herminiera elaphroxylon*. Kew.
7. **Phoma rudis**, Sacc. *Syll.* 395.  
On *Laburnum*. Kew.
8. **Phoma Rychkoltii**, Sacc. *Syll.* 404.  
On *Symphoricarpus*. Kew.
9. **Phoma xylostel**, Cks. & Hk. Sacc. *Syll.* 405.  
On *Lonicera*. Kew.
10. **Phoma loniceræ**, Cooke. Sacc. *Syll.* 407.  
On *Lonicera*. Irstead (F.B. I., 616.)
11. **Phoma viventis**, Cooke. *Grev.* XIV., 2.  
On living twigs of *Lonicera*. Kew.
12. **Phoma Beckhausii**, Cooke. *Grev.* XIII., 91.  
On *Viburnum lantana*. Dartford ; Kew.
13. **Phoma weigelie**, Speg. Sacc. *Syll.* 409.  
On *Weigelia rosea*. Kew.
14. **Phoma sambucina**, Sacc. *Syll.* 411.  
On *Sambucus nigra*.
15. **Phoma sambucella**, Sacc. *Syll.* 412.  
On *Sambucus nigra*. Kew.
16. **Phoma vicinum**, Desm. Sacc. *Syll.* 413.  
On decorticated *Sambucus nigra*. Whitehall ; Ascot.
17. **Phoma Landeghemie**, Sacc. *Syll.* 414.  
On *Philadelphus*. Kew.
18. **Phoma philadelphi**, Cooke. *Grev.* XIII., 93.  
On *Philadelphus*. Kew.
19. **Phoma foveolaris**, Fries. Sacc. *Syll.* 419.  
On *Euonymus*. Kew.
20. **Phoma celastrinæ**, Cooke. *Grev.* XIII., 92.  
On *Euonymus americanus*. Kew.
21. **Phoma berberina**, Sacc. *Syll.* 420.  
On *Berberis vulgaris*. Kew.
22. **Phoma prunorum**, Cooke. *Grev.* XIII., 92.  
On *Prunus lauro-cerasus*. Kew.
23. **Phoma pruni-lusitanicæ**, Cooke. *Grev.* XIII., 92.  
On *Prunus lusitanica*. Kew.
24. **Phoma Libertiana**, Sacc. & Roum. Sacc. *Syll.* 427.  
On *Larix europæus*. Kew.
25. **Phoma sorbariæ**, Sacc. *Syll.* 439.  
On *Spiræa callosa*, and *S. opulifolia*. Kew.
26. **Phoma opulifoliæ**, Cooke. *Grev.* XIV., 2.  
On *Spiræa opulifolia*. Kew.
27. **Phoma mali**, Sch. & Sacc. Sacc. *Syll.* 440.  
On apple twigs. Kew.
28. **Phoma ambigua**, Sacc. *Syll.* 441.  
On pear twigs. Kew ; Hampstead.
29. **Phoma amelanchieris**, Cooke. *Grev.* XIII., 93.  
On *Amelanchier*. Kew.

30. *Phoma Mulleri*, Cooke. Sacc. Syll. 445.  
On *Rubus*. Eastbourne.
31. *Phoma pusilla*, Sch. & Sacc. Sacc. Syll. 450.  
On *Rosa canina*. Kew.
32. *Phoma incarcerata*, Sacc. Syll. 453.  
On *Rosa canina*. Kew.
33. *Phoma japonica*, Sacc. Syll. 453.  
On *Kerria japonica*. Neatishead (Norfolk).
34. *Phoma vinifera*, Cooke (viticola, Sacc. Syll. 463).  
On *Vitis vinifera*. Kew.
35. *Phoma vitis*, Bon. Sacc. Syll. 464.  
On *Vitis vinifera*. King's Lynn; Shere.
36. *Phoma Cookei*, Pir. Sacc. Syll. 468.  
On *Vitis vinifera*. Terrington (F.B. I., 618).
37. *Phoma diplodioides*, Sacc. Syll. 475.  
On *Æsculus hippocastanum*. Kew.
38. *Phoma scobina*, Cooke. Grev. XIII., 92.  
On *Fraxinus excelsior*. Kew; Highgate; Darenth.
39. *Phoma forsythia*, Cooke. Grev. XIII., 92.  
On *Forsythia*. Kew.
40. *Phoma aromatica*, Cooke. Grev. XIV., 3.  
On *Calycanthus occidentalis*. Kew.
41. *Phoma domestica*, Sacc. Syll. 480.  
On *Jasminum officinale*. Kew.
42. *Phoma jasmini*, Cooke. Grev. XIV., 2.  
On *Jasminum officinale*. Kew.
43. *Phoma depressa*, Lev. Sacc. Syll. 481.  
On *Syringa vulgaris*. Kew.
- 43.\* *Phoma laurella*, Sacc. Syll. 486.  
On *Laurus nobilis*. Kew.
44. *Phoma rhododendri*, Cooke. Grev. XIII., 93.  
On *Rhododendron*. Kew.
45. *Phoma rhoïna*, Cooke. Sacc. Syll. 503.  
On *Rhus*. Whitehall; Swanscombe.
46. *Phoma corni*, Fekl. Sacc. Syll. 506.  
On *Cornus*. Kew.
47. *Phoma pulla*, Sacc. Syll. 511.  
On *Hedera helix*. Kew; Neatishead.
48. *Phoma barbari*, Cooke. Grev. XIV., 3.  
On *Lycium barbarum*. Kew.
49. *Phoma viridarii*, Sacc. Syll. 523.  
On *Magnolia*. Kew.
50. *Phoma stictica*, B. & Br. Sacc. Syll. 524.  
On *Buxus sempervirens*. Shrewsbury; Kew.
51. *Phoma cistina*, Cooke, Grev. XIV., 3.  
On *Cistus laurifolius*. Kew.
52. *Phoma Robergeana*, Sacc. Syll. 524.  
On *Staphylea pennata*. Kew.



53. *Phoma staphyleæ*, Cooke. *Grev.* XIV., 2.  
On *Staphylea pennata*, &c. Kew.
54. *Phoma ophites*, Sacc. *Syll.* 527.  
On *Hibiscus syriacus*. Kew.
55. *Phoma exul*, Sacc. *Syll.* 528.  
On *Maclura aurantiaca*. Kew.
56. *Phoma loti*, Cooke. *Grev.* XIV., 2.  
On *Diospyros lotus*. Kew.
57. *Phoma tecomæ*, Sacc. *Syll.* 536.  
On *Tecoma radicans*. Kew.
58. *Phoma radicans*, Cooke. *Grev.* XIII., 92.  
On living *Tecoma radicans*. Kew.
59. *Phoma platanoides*, Cooke. *Grev.* XIII., 93.  
On *Acer pseudoplatanus*. Kew.
60. *Phoma Lebiseyi*, Sacc. *Syll.* 541.  
On *Negundo aceroides*. Kew.
61. *Phoma velata*, Sacc. *Syll.* 542.  
On *Tilia europæa*. Kew; Highgate; Blackheath.
62. *Phoma paulowniæ*, Thum. Sacc. *Syll.* 545.  
On *Paulownia imperialis*. Kew.
63. *Phoma tamaricella*, Sacc. *Syll.* 551.  
On *Tamarix*. Kew; Walmer.
64. *Phoma tamarisci*, Mont. Sacc. *Syll.* 553.  
On *Tamarix gallica*. Kew.
65. *Phoma elæagnella*, Cooke. *Grev.* XIV., 4.  
On *Elæagnus*. Kew.
66. *Phoma hapalocystis*, Sacc. *Syll.* 554.  
On *Platanus*. Kew.
67. *Phoma nothum*, Berk. Sacc. *Syll.* 556.  
On *Platanus*. Near Bristol.
68. *Phoma radula*, B. & Br. Sacc. *Syll.* 557.  
On *Platanus*. Batheaston.
69. *Phoma moricola*, Sacc. *Syll.* 564.  
On *Morus nigra*. Kew.
70. *Phoma crassipes*, Cooke. *Grev.* XIV., 2.  
On *Broussonetia papyrifera*. Kew.
71. *Phoma cinerescens*, Sacc. *Syll.* 567.  
On *Ficus carica*. Kew; Highgate.
72. *Phoma juglandina*, Sacc. *Syll.* 568.  
On *Juglans regia*. Kew.
73. *Phoma quercella*, Sacc. & Roum. Sacc. *Syll.* 569.  
On *Quercus coccinea*. Kew.
74. *Phoma salicina*, West. Sacc. *Syll.* 578.  
On *Salix*. Kew.
75. *Phoma ligustrina*, Sacc. *Syll.* 580.  
On *Ligustrum*. Regent's Park.
76. *Phoma mutica*, B. & Br. Sacc. *Syll.* 581.  
On *Alnus glutinosa*.

77. *Phoma oppilata*, Fries. *Sacc. Syll.* 585.  
On *Betula*. Kew.
78. *Phoma eres*, Sacc. *Syll.* 586.  
On *Ulmus*. Kew; Hampstead.
79. *Phoma planiuscula*, Sacc. *Syll.* 587.  
On *Robinia pseudacacia*. Swanscombe.  
On *Ulmus campestris*. Kew; Highgate.
80. *Phoma celtidis*, Cooke. *Grev.* XIV., 3.  
On *Celtis occidentalis*. Kew.

## B. FOLLICOLÆ.

81. *Phoma parca*, B. & Br. *Sacc. Syll.* 592.  
On leaves of *Abies excelsa*. Batheaston.
82. *Phoma strobil*, B. & Br. *Sacc. Syll.* 603.  
On leaves and cones of *Pinus strobus*. Glamis; Spye Park.
83. *Phoma geniculata*, B. & Br. *Sacc. Syll.* 604.  
On leaves of *Pinus strobus*. Spye Park; Menmuir.
- 83\* *Phoma thujana*, Thum. *Sacc. Syll.* 605.  
On leaves and twigs of *Thuja*. Lyndhurst.
84. *Phoma taxi*, Berk. *Sacc. Syll.* 606.  
On leaves of *Taxus baccata*. Forden (F.B. i. 529.)
- 84\* *Phoma hystereella* Sacc. *Syll.* 607.  
On leaves of *Taxus baccata*. Hampton in Arden (W. B. Grove.)
85. *Phoma petiolorum*, Desm. *Sacc. Syll.* 611.  
On petioles of *Robina*. Dartford.
86. *Phoma leucostigma*, Lev. *Sacc. Syll.* 623.  
On leaves of *Hedera* and *Buxus*. Kew.
87. *Phoma Candollei*, B. & Br. *Sacc. Syll.* 624.  
On leaves of *Buxus*. Swanscombe (F.B. i. 159.)
- 87\* *Phoma Mirbelii*, Fr. *Sacc. Syll.*, 625, including *P. delitescens*, Wallr.  
*Sacc. Syll.*, 626.  
On leaves of Box. Kent; Hampton in Arden (W. B. G.)
- 87\* *Phoma ilicicola*, C. & E., *Sacc. Syll.*, 629.  
On holly leaves. Hampton in Arden (W. B. G.)
88. *Phoma sorbi*, Lasch. *Sacc. Syll.* 634.  
On leaves of *S. aucuparia*. Highgate (F.B. i. 128); Shere;  
Lancashire; Tay; Ross; (N.B.)
89. *Phoma collabens*, Cooke. *Grev.* XIII. 94.  
On living leaves of *Prunus lusitanica*. Kew.
90. *Phoma piceata*, B. & Br. *Sacc. Syll.* 638.  
On rose leaves. King's Cliffe.
91. *Phoma rhodora*, Cooke. *Grev.* XIV., 3.  
On *Rhododendron* leaves. Kew.
92. *Phoma subnervisequum*, Desm. *Sacc. Syll.* 670.  
On *Lathyrus*. (Rev. T. Salwey.)
93. *Phoma cylindrospora*, Desm. *Sacc. Syll.* 671.  
On leaves and petioles of Ivy. Forfarshire.

94. *Phoma Ralfsii*, B. & Br. *Sacc. Syll.* 672.  
On leaves of *Hedera helix*. Aberystwyth.
95. *Phoma visci*, *Sacc. Syll.* 673.  
On Mistletoe.
96. *Phoma dispersa*, Cooke. *Grev.* XIII., 93.  
On leaves of *Platanus*. Kew.
97. *Phoma aucubæ*, West. *Sacc. Syll.* 684.  
On leaves of *Aucuba*. Highgate; Kew.  
= var. *ramealis*.  
On twigs of *Aucuba*. (Rev. J. E. Vize.)
98. *Phoma mahoniæ*, Thum. *Sacc. Syll.* 695.  
On leaves of *Mahonia*. Kew.

## 2. On Herbaceous Dicotyledons.

### A. CAULICOLÆ.

99. *Phoma vulgaris*, *Sacc. Syll.* 707.  
On twigs of *Clematis vitalba*. Kew; Dartford.
100. *Phoma lingam*, Tode. *Sacc. Syll.* 709.  
On Cabbage stalks. Hampstead; Kew.
101. *Phoma caryophylli*, Cooke. *Grev.* XIII. 94.  
On stems and calyces of cultivated Pinks. Shrewsbury.
102. *Phoma phaseoli*, Desm. *Sacc. Syll.* 717.  
On stems of *Phaseolus*. Highgate.
103. *Phoma alcearum*, Cooke. *Grev.* XIII., 94.  
On Hollyhock. Kew.
104. *Phoma malvacearum*, West. *Sacc. Syll.* 729.  
On *Malva*. Kew; Hendon; Leatherhead.
105. *Phoma arctii*, Lasch. *Sacc. Syll.* 731.  
On *Lappa*. Kew; Dartford; Highgate.
106. *Phoma dipsaci*, Cooke. *Grev.* XIII. 94.  
On *Dipsacus sylvestris*. Kew.
107. *Phoma albicans*, Desm. *Sacc. Syll.* 734.  
On peduncles of *Compositæ*. Tottenham.
108. *Phoma achilleæ*, *Sacc. Syll.* 738.  
On *Achillea millefolia*. Kew.
109. *Phoma solidaginis*, Cooke. *Grev.* XIII. 94.  
On *Solidago*. Kew; Whitehall.
110. *Phoma dahlis*, Berk. *Sacc. Syll.* 1015.  
On *Dahlia*. Kew; King's Cliffe.
111. *Phoma longissima*, Fries. *Sacc. Syll.* 748.  
On stems of *Umbelliferæ*. Berwick.
112. *Phoma complanata*, Pers. *Sacc. Syll.* 751.  
On herb stems. Highgate; Darenth.
113. *Phoma asteriscus*, Berk. *Sacc. Syll.* 753.  
On *Heracleum*. Highgate; Thirsk; Jedburgh.
114. *Phoma rubella*, Cooke. *Grev.* XIV., 2.  
On stems of *Umbelliferæ*. Kew.

115. *Phoma projecta*, Cooke. *Sacc. Syll.* 755.  
On *Heracleum*. Mickleham ; Swanscombe.
116. *Phoma lycopersici*, Cooke. *Grev.* XIII., 94.  
On stems of Tomato. Forden (Rev. J. E. Vize.)
117. *Phoma dulcamaræ*, Sacc. *Syll.* 759.  
On *Solanum dulcamara*. Kew.
118. *Phoma tatulæ*, Cooke. *Sacc. Syll.* 762.  
On *Datura stramonium*. Kew.
119. *Phoma nitidula*, Sacc. *Syll.* 766.  
On *Scrophularia*. Neatishead (Norfolk).
120. *Phoma errabunda*, Desm. *Sacc. Syll.* 767.  
On *Verbascum*. Darenth (F.B. I. 619).
121. *Phoma polemonii*, Cooke. *Grev.* XIII., 94.  
On *Polemonium cæruleum*. Kew.
122. *Phoma labiatarum*, Cooke. *Grev.* XIII., 94.  
On *Marrubium*. Kew.
123. *Phoma devastatrix*, B. & Br. *Sacc. Syll.* 791.  
On *Lobelia*. Shrublands.
124. *Phoma spirææ*, Desm. *Sacc. Syll.* 792.  
On *Spiræa ulmaria*. Kew ; Tottenham ; Irstead.
125. *Phoma herbarum*, West. *Sacc. Syll.* 793.  
On *Digitalis*. Kew.  
On *Ruta*. Regent's Park.  
On petioles of *Catalpa*. Highgate.  
On *Malva*. Kew ; Swanscombe.  
On *Aristolochia siphon*. Kew.  
On *Menispermum*. Kew.
126. *Phoma acuta*, Fries. *Sacc. Syll.* 794.  
On *Urtica* and *Ballota*. Hampstead.
127. *Phoma exigua*, Desm. *Sacc. Syll.* 797.  
On *Ranunculus*. Abridge ; Hendon.
128. *Phoma polygonorum*, Cooke. *Grev.* XIV., 3.  
On *Polygonum cuspidatum*. Kew.
129. *Phoma onagracearum*, Cooke. *Grev.* XIII., 95.  
On *Epilobium angustifolium*. Kew.  
On *Oenothera biennis*. Kew.
130. *Phoma nebulosa*, Pers. *Sacc. Syll.* 801.  
On *Urtica*. Shere (F.B. I., 621), Thirsk ; Berwick ; Edinburgh ; Norfolk.
131. *Phoma subordinaria*, Desm. *Sacc. Syll.* 805.  
On *Plantago*. King's Lynn (F.B. I., 617. ; II., 13).
132. *Phoma oleracea*, Sacc. *Syll.* 802.  
On *Erysimum alliaria*, *Sisymbrium austriacum*. Kew.
133. *Phoma sarmenticia*, Sacc. *Syll.* 807.  
On *Menispermum canadense*. Kew.  
On *Cocculus carolinianus*. Kew.
134. *Phoma calystegiae*, Cooke. *Grev.* XIII., 94.  
On *Calystegia sepium*. Kew.

135. *Phoma cacti*, Berk. Sacc. Syll. 817.  
On *Cactus*. Highgate.
136. *Phoma lirella*, Desm. Sacc. Syll. 824.  
On stems of *Vinca*. Swanscombe.
137. *Phoma Durandiana*, Sacc. & Roum. Sacc. Syll. 828.  
On *Rumex*. Kew; Totteridge; Dartford.
138. *Phoma lysimachiae*, Cooke. Grev. XIII., 94.  
On *Lysimachia vulgaris*. Kew.
139. *Phoma superflua*, Sacc. Syll. 826.  
On *Scabiosa*. Aberdeen.

## B. FOLLICOLÆ.

140. *Phoma vincae*, Curr. Sacc. Syll. 862.  
On leaves of *Vinca*. Bungay.

## 3. On Fruits and Flowers of Dicotyledons.

141. *Phoma leguminum*, West. Sacc. Syll. 870.  
On various legumes. Forden (F.B. II., 414); Hampstead.
142. *Phoma capsularum*, Cooke. Sacc. Syll. 874.  
On pods of *Robinia*, &c. Highgate.
- 142\* *Phoma lineolata*, Desm. Sacc. Syll. 896.  
On scales of Larch. Hampton in Arden (W. B. G.)
143. *Phoma glandicola*, Desm. Sacc. Syll. 900.  
On acorns. Kew; Hampstead; Dartford.
144. *Phoma samarorum*, Desm. Sacc. Syll. 911.  
On samara of *Fraxinus*. Highgate (F.B. I. 160); Thirsk;  
Hampstead (F.B. II., 15); Fern, N.B.; Norfolk; Kew;  
Shere; Dartford; Shrewsbury.
145. *Phoma morphæa*, Sacc. Syll. 916.  
On capsules and stems of *Papaver somniferum*. Kew.
146. *Phoma eriophorum*, B. & Br. Sacc. Syll. 919.  
On chestnuts. Batheaston.

## 4. On Monocotyledons.

147. *Phoma chamæropis*, Cooke, Grev., XIII., 95.  
On palm petioles. Kew.
148. *Phoma tamicola*, Cooke, Grev., XIII., 95.  
On stems of *Tamus*.
149. *Phoma microscopicum*, B. & Br. Sacc., Syll., 948.  
On stems of *Potamogeton*.
150. *Phoma acoxi*, Cooke, Grev., XIII., 95.  
On *Acorus calamus*. Kew; Totteridge.
151. *Phoma asparagi*, Sacc. Syll. 966.  
On stems of *Asparagus*. Hampstead.
152. *Phoma rusci*, Sacc. Syll. 968.  
On stems and phyllodes of *Ruscus*. Kew.
153. *Phoma arundinacea*, Lev. Sacc. Syll. 983.  
On reeds.

154. *Phoma typharum*, *Fekl. Sacc. Syll.* 987.  
On *Typha*. Kew.

5. On *Cryptogamia*.

155. *Phoma epitricha*, *B. & Br. Sacc. Syll.* 1005.  
On *Equisetum*. Pitsligo.

6. On *Miscellaneous Substances*.

156. *Phoma chartarum*, *B. & C. Sacc. Syll.* 1008.  
On paper. London.

GEN. 2. **AOSPHÆRIA**, *Sacc. (not B. & Br.)*.

Perithecia globose, papillate, subcarbonaceous, superficial, or with the base sunk into the matrix. Sporules ovoid, oblong, or almost spherical, continuous, hyaline; basidia absent or very short, mostly growing on wood.

157. *Aosphaeria epileuca* (*Berk.*), *Sacc. Syll.* 1018.  
On pine planks. Woodnewton.
158. *Aosphaeria bicuspidata* (*Berk.*), *Sacc. Syll.* 1026.  
On pine planks. Woodnewton.
159. *Aosphaeria inophila* (*Berk.*), *Sacc. Syll.* 1050.  
On maple planks. King's Cliffe.
160. *Aosphaeria ulmicola* (*Berk.*), *Sacc. Syll.* 1053.  
On elm planks. King's Cliffe.
161. *Aosphaeria mucifera* (*Berk.*), *Sacc. Syll.* 1054.  
On elm planks. King's Cliffe.
162. *Aosphaeria glomerata*, *Corda, Sacc. Syll.* 1055.  
On elm chips. King's Cliffe.
163. *Aosphaeria fibricola* (*Berk.*), *Sacc. Syll.* 1058.  
On oak, ash, elm and poplar wood. Forden, King's Cliffe.

GEN. 3. **DENDROPHOMA**, *Sacc. Syll.* III., 178.

Perithecia subcutaneous, rarely superficial, subglobose, papillate, between membranaceous and carbonaceous, naked. Sporules oblong, ovoid or allantoid, hyaline. Basidia branched, often in a verticillate manner.

164. *Dendrophoma pruinosa*, *Fr. Sacc. Syll.* 1077.  
On branches of *Fraxinus*. Twycross.

GEN. 4. **NEOTTIOSPORA**, *Desm., Sacc. Syll.* III. 206.

Perithecia wholly immersed, spherical, membranaceous, opening by a round or irregular pore. Sporules oblong-fusoid, with a tuft of setæ at the apex, continuous, hyaline.

165. *Neottiospora caricum*, *Desm. Sacc. Syll.* 1294.  
On dead *Carices*. Rudloe (Wilts). Batheaston; Moray.

GEN. 5. **CONIOTHYRIUM**, *Corda*. *Sacc. Syll.* III., 305.

Perithecia subcutaneous, erumpent, or somewhat superficial, globose or depressed, papillate, membranaceous or rather carbonaceous. Sporules globose or ellipsoid, small, continuous, diaphanous, slightly coloured; basidia short, simple, or obsolete.

166. **Coniothyrium hederæ**, *Desm.* *Sacc. Syll.* 1728.

On leaves and twigs of ivy. King's Cliffe.

167. **Coniothyrium cassiæcolum**, *Cooke. Grev.* XIII., 96.

On stems of *Cassia Marylandica*. Kew.

168. **Coniothyrium sphærospermum**, *Fekl. Sacc. Syll.* 1733,

On *Ulex*. New Forest.

169. **Coniothyrium concentricum**, *Desm. Sacc. Syll.* 1789.

On leaves of *Yucca*. King's Lynn; Oswestry; Kew; Northamptonshire.

GEN. 6. **RHADOSPORA**, *Mont. Sacc. Syll.* III., 578.

Perithecia sub-cuticular, erumpent, globose, or depressed, typically papillate, sometimes hysteroform. Sporules rod-shaped or thread-like, multiguttulate, or pseudo-septate, hyaline.

170. **Rhadospora ramealis**, *Desm. Sacc. Syll.* 3151.

On bramble twigs. Barnet.

171. **Rhadospora Muggenbergii**, *Sacc. Syll.* 3155.

On branches of *Vitis vinifera*. Kew.

172. **Rhadospora salicella**, *B. & Br. Sacc. Syll.* 3176.

On branches of *Salix*. Penzance.

173. **Rhadospora lituus**, *B. & Br. Sacc. Syll.* 3183.

On branches. Penzance.

174. **Rhadospora fibriseda**, *Berk. Sacc. Syll.* 3186.

On birch wood. King's Cliffe.

GEN. 7. **DILOPHOSPORA**, *Desm. Sacc. Syll.* III., 600.

Perithecia globose, pierced, often immersed in a crustaceous stroma. Sporules cylindrical, continuous, hyaline, ornamented with a tuft of setæ at each extremity.

175. **Dilophospora graminis**, *Desm. Sacc. Syll.* 3261.

On wheat and grasses. Ely; Kidbrooke; King's Cliffe.

*Sub-Fam. II. SPHÆRONEMÆÆ.*

Perithecia naked, distinctly rostellate; sporules for the most part continuous, and hyaline.

GEN. 1. **SPHÆRONEMA**, *Fr. Sacc. Syll.* III., 185.

Perithecia membranaceous, coriaceous or carbonaceous, innate or superficial, globose, with a more or less subulate ostiolum. Sporules ovoid or oblong, continuous, subhyaline, forming when expelled a globule at the apex of the ostiolum.

175.\**Sphæronema æmulans*, B. & Br. *Sacc. Syll.* 1160.  
On wood. Epping Forest.

176. *Sphæronema deformans*, Berk. *Sacc. Syll.* 1167.  
On leaves of *Eranthemum pulchellum*.

177. *Sphæronema epimyces*, Berk. *Sacc. Syll.* 1176.  
On *Corticium comedens*.

GEN. 2. **CICINNOBOLUS**, Ehr. *Sacc. Syll.* III. 216.

Perithecia small, conical, oblong, or somewhat pear-shaped, membranaceous, ochrey-brown, pierced at the apex, parasitic amongst the threads of *Oidium*. Sporules ovoid, continuous, hyaline, expelled in a long tendril.

178. *Cicinnobolus cesatii*, DBary. *Sacc. Syll.* 1293.  
Parasitic on *Oidium erysiphoides*.

This sub-family includes also the genera—

*Rhynchophoma*, Karst. *Sacc. Syll.* III., 414.

*Sphærographium*, *Sacc. Syll.* III., 596.

*Cornularia*, Karst. *Sacc. Syll.* III., 598,

but we know of no British species.

### Sub-Fam. III. VERMICULARIÆ, Fr.

Perithecia tomentose, villous, or clad with hairs, bristles, spines, or hair-like processes. Sporules chiefly continuous and hyaline.

GEN. 1. **VERMICULARIA**, Fr. *Sacc. Syll.* III., 221.

Perithecia erumpent or subsuperficial, membranaceo-carbonaceous, black, globose or conical, at length often concave, pierced at the apex, or astomous, clothed with rather long, rigid, septate dark-coloured bristles. Sporules cylindrical, fusiform, often unequal-sided, continuous, hyaline.

179. *Vermicularia trichella*, Fr. *Sacc. Syll.* 1329.  
On ivy leaves. Stratford-on-Avon; Highgate; Dartford.

180. *Vermicularia dematium*, Fr. *Sacc. Syll.* 1336.  
On herbaceous stems. Twycross; King's Cliffe; Darenth.  
(F. B. II., 116.)

181. *Vermicularia eryngii*, Desm. *Sacc. Syll.* 1342.  
On *Eryngium*. Fleetwood.

182. *Vermicularia atramentaria*, B. & Br. *Sacc. Syll.* 1345.  
On potato stems. Forden.

183. *Vermicularia circinans*, Berk. *Sacc. Syll.* 1376.  
On onions.

184. *Vermicularia liliacearum*, West. *Sacc. Syll.* 1374.  
On *Scilla nutans* and *Convallaria*.

This sub-family includes also the genera *Muricularia*, *Staurochaeta*, *Pyrenochaeta*, and *Chaetomella*.



*Sub-Fam. IV. DIPLODIÆ.*

Perithecia submembranaceous or carbonaceous, naked. Sporules uniseptate (rarely continuous), coloured (except in *Diplodina*.)

GEN. 1. **SPHÆROPSIS**, *Lev. Sacc. Syll.* III., 291.

Perithecia subcutaneous, erumpent, globose, papillate, between membranaceous and carbonaceous, black. Sporules ovoid or oblong, continuous, smoky-brown; basidia filiform.

185. **Sphæropsis visci**, *Sollm. Sacc. Syll.* 1659.

On leaves and twigs of mistletoe.

186. **Sphæropsis pinastri**, *Lev. Sacc. Syll.* 1692.

On leaves and cones of *Pinus sylvestris*. Eastbourne.

GEN. 2. **HAPLOSPORELLA**, *Speg. Sacc. Syll.* III., 323.

Perithecia cæspitose, erumpent, black, subcarbonaceous, papillate, or immersed in a verruciform stroma. Sporules as in *Sphæropsis*.

187. **Haplosporella cæspitosa**, *B. & Br. Sacc. Syll.* 1815.

On ivy twigs. King's Cliffe.

188. **Haplosporella melogrammata**, *Cooke in Vize's Ess. No.* 104.

On bark. Forden.

GEN. 3. **DIPLODIA**, *Fr. Sacc. Syll.* III., 329.

Perithecia subcutaneous, erumpent, somewhat carbonaceous, black, typically papillate, pierced. Sporules ellipsoid, ovoid, or oblong, uniseptate, brown. Basidia simple, rod-like, hyaline.

A. On woody Dicotyledons.

\* On branches.

189. **Diplodia tilia**, *Fckl. Sacc. Syll.* 1829.

On lime branches. Blackheath.

190. **Diplodia subsecta**, *Fr. Sacc. Syll.* 1834.

On maple branches. Northamptonshire.

191. **Diplodia atrata**, *Desm. Sacc. Syll.* 1835.

On *Negundo aceroides*. Kew.

192. **Diplodia aesculi**, *Lev. Sacc. Syll.* 1837.

On horse chestnut. Jedburgh.

193. **Diplodia viticola**, *Desm. Sacc. Syll.* 1841.

On vine twigs. King's Cliffe.

194. **Diplodia ramulicola**, *Desm. Sacc. Syll.* 1846.

On *Euonymus europæus*.

195. **Diplodia ilicicola**, *Desm. Sacc. Syll.* 1848.

On holly. Highgate (F. B. I., 449); Forden; Milton.

196. **Diplodia genistarum**, *Cooke. Grev. XIII., 96.*

On *Genista athenensis*, and *Coronilla*. Kew.

197. **Diplodia profusa**, *De Not. Sacc. Syll.* 1861.

On *Robinia pseudacacia*.

198. **Diplodia sarothamni**, *Cke. & Hk. Sacc. Syll.* 1870.

On *Sarothamnus*. Swanscombe.

# Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY  
AND ITS LITERATURE.

## NEW BRITISH FUNGI.

By M. C. COOKE.

(Continued from p. 7.)

**Agaricus (Pluteus) pellitus**, Pers. Syn. 366.

*White.* Pileus rather fleshy, convex, then plane, even, dry, silky. Stem stuffed, smooth, even, shining. Gills flesh-coloured.—Fr. Hym. Eur. 187: Cooke Illus. t. 597.

On trunks and on the ground about them. Scarboro' (G. Massee). Pileus 2 in. broad. Stem 2 in. long, 2-3 lines thick.

**Agaricus (Pluteus) roseo-albus**, Fr. Hym. Eur. 188.

Pileus rather fleshy, convex, then expanded, even, smooth, *rosey*, margin naked. Stem solid, attenuated, *pruinose with white*; gills free, rather distant, flesh-coloured.—*Flora Danica*, t. 1679. Cooke Illus. t. 598.

On elm trunk. Burghill Court, Herefordshire.

Pileus 3 in. broad. Stem 2-3 in. long,  $\frac{1}{2}$  in. thick, commonly curved and ascending.

**Agaricus (Flammula) ochrochlorus**, Fr. Hym. Eur. 252.

Cæspitose. Pileus fleshy, convex then plane, obtusely umbonate, dry, minutely silky, rather squamulose, *greenish straw-colour*, stem hollow, squamose, clad with white flocci, flexuous, at the base and within ferruginous; gills adnate, crowded, whitish then greenish, at length olivaceous.

On old trunks. Scarboro' (G. Massee).

Size and habit of *Ag. fascicularis*, but spores pure ferruginous.

**Agaricus (Stropharia) luteo-nitens**, Fr. Hym. Eur. 286.

Pileus fleshy, thin, conical-campanulate, umbonate, viscid, yellow, margin squamulose, stem hollow, even, pruinose above the distant ring, gills adnexed, ventricose, cinereous, becoming blackish.—*Flora Danica*, t. 1067. Cooke Illus. t. 604.

On sawdust, dung, and humus. Crackley Wood, Kenilworth.

Pileus 1-2 in. Stem 2 in. long, 2 lines thick.

**Agaricus (Stropharia) hypsipus**, *Fr. Hym. Eur.* 290.

Pileus convex, then plane, *even, smooth, hygrophanous*; stem hollow, equal, *smooth*, ring medial, persistent, gills adnate, seceding, rather distant; white, then brown.—*Fr. Icon. t.* 132, *f.* 2. *Cooke Illus. ined.*

Solitary in swampy places. Scarboro' (G. Massee).

Fragile. Stem 3-4 in. long, 2-3 lines thick. Pileus 2 in. broad, striate at the margin, tan-coloured or pallid when dry.

**Cortinarius (Phlegm.) talus**, *Fr. Hym. Eur.* 344.

Pileus fleshy, convex, equal, even, smooth, viscid; stem solid, equal, cylindrical, rather smooth, marginate-bulbous at the base, *as well as the flesh growing pallid*; gills emarginate, rather crowded, ochraceous straw-colour (scarcely discoloured).—*Fr. Icon. t.* 145, *f.* 2.

In woods. Epping Forest.

Pileus 2 in. or a little more, opaque in colour. Stem 3 in. long,  $\frac{1}{2}$  in. thick.

**Cortinarius (Phlegm.) decolorans**, *Fr. Hym. Eur.* 351.

Pileus fleshy, equal, expanded, even, smooth, viscid, of one colour; stem stuffed, elongated, attenuated, smooth, naked above the somewhat persistent median ring, *and as well as the flesh white*; gills affixed, thin, *without juice*, purplish, soon becoming cinnamon.

In fir woods. Epping forest.

Pileus yellow,  $1\frac{1}{2}$ - $2\frac{1}{2}$  in. Stem 2-3 in. long, 3-4 lines thick.

**Cortinarius (Inoloma) argentatus**, *Fr. Hym. Eur.* 360.

Pileus fleshy, convex, becoming smooth, shining silvery-grey, disc rather gibbous, becoming pallid, *about the margin at first silky-lilac*, then growing whitish; stem stout, white, of the same colour within; gills emarginate, crowded, serrate, pale, then watery cinnamon.

In woods. Epping Forest.

Pileus as much as 4 in. broad. Stem 4 in. long, or abbreviated. A smaller and more slender form is found in pine woods.

**Cortinarius (Telamonia) triformis**, *Fr. Hym. Eur.* 382.

var. **Schaefferi**, *Fries. Mon. Hym. II.*, 73.

Pileus fleshy, *convex, then plane*, somewhat umbonate, fibrillose or becoming smooth, opaque, tawny, then yellowish, hygrophanous, margin thin; stem stuffed, *clavate*, becoming smooth, pallid, spongy within, ring white, gills somewhat adnate, rather crowded, yellowish honey-colour, at length pale cinnamon.

In woods. Alresford, Hants (Rev. W. L. Eyre).

Pileus 2-3 in. broad. Stem 3 in. long,  $\frac{1}{2}$  in. thick.

**Cortinarius (Hydrocybe) privignus**, *Fr. Hym. Eur.* 388.

Pileus fleshy, thin, convex then plane, gibbous, even, pale tawny, smooth, or with a *fibrillose adpressed hoary silvery bloom*; stem stuffed, then hollow, rather attenuated, silvery, here and there silky with the white veil, gills adnate, somewhat crowded, watery, then opaque cinnamon, edge serrate, white.

In pine woods. Woolhope Foray, 1885.

Pileus 2 in. broad. Stem 3 in. long, 3 lines thick, equal or contorted

**Cortinarium (Hydrocybe) saturninus**, *Fr. Hym. Eur.* 390.

Pileus fleshy, thin, campanulate, then expanded, smooth, moist, dark bay, (testaceous), becoming discoloured, *silky at the margin*, with the white fibrillose veil; stem stuffed, even, *violet*, incrassated at the base, gills adnexed, thin, crowded, purplish then watery cinnamon.

In grassy places. Woolhope Foray, 1885.

Pileus 2-3 in. broad. Stem 2-3 in. long,  $\frac{1}{4}$ -1 in. thick, gills broad, reaching to 4 lines.

**Æcidium zonale**, *Breb. in Duby. Bot. Gal.* 906.

Hypophyllous. Spots purple-brown and yellow zoned, pseudoperidia collected in suborbicular tufts, annulately and circinate disposed, cup-shaped, pallid yellow, mouth rather denticulate, somewhat reflexed; spores pale yellow.

On *Inula dysenterica*. Totland Bay, Isle of Wight (H. P. Fitzgerald).

**Puccinia gentianæ** (Strauss). *Link. Sp. II.*, 73.

Uredo-form—*Uredogentianæ* (Strauss) *D.C. Fl. Fr.* VI., 64.

Teliospores—*Puccinia gentianæ*, Link.

Spots obliterated, sori subrotund, variable in size, scattered, amphigenous; spores umber.—*W. G. Smith, in Gard. Chron.*, 1885.

On *Gentiana acaulis*. Kew. Aug., 1885.

**Puccinia silai**, *Fckl. Symb. p.* 53. *Fungi Rhen.* 360. *Thum. Myc. Univ.*, No. 235.

Uredospores and teliospores intermixed. Spots obliterated. Sori oval or subrotund on both surfaces, surrounded by the ruptured cuticle, dark brown. Spores umber.

On *Silene pratensis*. Pontrilas.

Referred by Dr. Winter to *Puccinia bullata*.

**Phyllosticta sidæcola**, *Cooke*.

Epiphyllous. Spots brown, indistinct, becoming pallid in the centre, irregular or confluent; perithecia punctiform, membranaceous, brown, minute. Sporules elliptical, enucleate, hyaline, ( $0.004 \times 0.002$  mm.).

On fading leaves of *Sida napæa*. Kew.

**Phyllosticta aizoon**, *Cooke*.

Epiphyllous. Spots small, suborbicular, brown, with a darker margin. Perithecia minute, membranaceous, brown, immersed. Sporules elliptic, continuous, hyaline,  $0.003 \times 0.0015$  mm.

On leaves of *Sedum aizoon*. Kew.

**Phyllosticta potamia**, *Cooke*.

Spots pale ochraceous, becoming brownish, without any distinct margin. Perithecia chiefly on the under surface, punctiform, black, somewhat protuberant and shining. Conidia elliptical, hyaline ( $0.01-0.012 \times 0.003$  mm.).

On leaves of *Potamogeton*. Lyndhurst, Hants; Epping Forest.

**Phyllosticta Bolleana**, *Thum. Sacc. Syll.* 620.

In our opinion this is certainly a *Phyllosticta*, and not a *Phoma*.

On leaves of *Hoya carnosa*. Neatishead.

***Asteroma solidaginis*, Cooke.**

Perithecia minute, collected in dark suborbicular patches, seated on a delicate brown reticulate cuticular mycelium, which is more or less radiating. Sporules elliptical, minute, hyaline, continuous.

On fading leaves of *Solidago elliptica*. Kew.

***Septoria primulae*, Bucknall.**

Epiphyllous. Spots pallid, orbicular, with a brown margin, scattered. Perithecia few, punctiform, semi-immersed, black, seated in the centre of the pallid spots. Sporules linear, straight, hyaline,  $\cdot 047$  mm. long.

On leaves of Primrose. Leigh Wood (C. B.).

***Cladosporium Kniphosiae*, Cooke.**

Amphigenous, olivaceous, caespitose. Tufts small, gregarious or confluent, velvety. Hyphae simple, erect, flexuous, confluent at the base in fascicles, amber coloured. Septae rather short, nodulose. Conidia normally uniseptate, ultimately often with two or three septa, twice the diameter of the hyphae, elliptical,  $\cdot 025\text{--}\cdot 03 \times \cdot 01$  mm., pale olive.

On dead leaves of *Kniphofia aloides*. Kew.

It is somewhat difficult to determine the limits of species in this genus, but the present seems to have a definite character.

***Ramularia sclerata*, Cooke.**

Spots elongated, brownish, soon occupying the greater part of the leaf. Hyphae short, scattered, mostly on the under surface. Conidia elliptico-cylindrical, rounded at the ends, granular, hyaline,  $\cdot 02 \times \cdot 0035$ .

On radical leaves of *Ranunculus scleratus*. Lyndhurst, Hants.

***Ramularia lychnicola*, Cooke.**

Hypophyllous. Spots orbicular, ochraceous. Hyphae fasciculate, in small tufts, simple, short. Conidia elongated, elliptical, obtuse, continuous, hyaline,  $\cdot 012\text{--}\cdot 015 \times \cdot 004$  mm.

On leaves of *Lychnis diurna*. Lyndhurst.

***Ramularia lamsanae*, Desm.**

Threads tufted, simple or shortly branched ( $\cdot 30\text{--}\cdot 50 \times \cdot 3$ ), continuous. Conidia fusoid ( $\cdot 01\text{--}\cdot 015 \times \cdot 0035\text{--}\cdot 004$  mm.), hyaline, continuous, catenulate. *Sacc. Fungi Ital.* t. 995.

On living leaves of *Lampsana communis*. Basingstoke (H. P. Fitzgerald).

***Ramularia alnicola*, Cke.**

Epiphyllous. Spots orbicular, glaucous-grey, at length fuliginous. Hyphae very short. Conidia elliptical, continuous, hyaline, sometimes concatenate,  $\cdot 01\text{--}\cdot 014 \times \cdot 004$ .

On leaves of *Alnus glutinosa*. Lyndhurst, Hants.

***Ceratostoma (Ceratostomella) vestita*, Sacc. Syll. No. 1550.**

Perithecia scattered, sub-superficial, globose ( $\frac{1}{3}\text{--}\frac{1}{2}$  mm. diam.), clad with tortuous septate hairs. Ostiolar cylindrical, naked, equal to the perithecia. Asci cylindrical, obtuse at the apex, shortly stipitate.

Sporidia uniseriate, ellipsoid ( $0.006 \times 0.0033-0.004$  mm.), often unequal sided, biguttulate, hyaline.

On rotten wood, probably oak. Mattishall, Norfolk (C. B.).

***Didymosphaeria conoidea*, Niessl. Sacc. Syll. 2644.**

Perithecia scattered, covered, becoming free, rather large, conoid, flattened at the base, the apex sometimes a little depressed. Ostiola papillate or somewhat conical, black, shining, rather hard. Asci cylindrical, with a short stem. Sporidia uniseriate, obovate, septate at the middle, a little constricted, pale olivaceous ( $0.006-0.009 \times 0.005$  mm.).

On herbaceous stems. Near Bristol (C. B.).

## ANNUAL FUNGUS FORAYS.

**ESSEX FIELD CLUB.**—This excursion, as last year, was extended over two days, October 2nd and 3rd—the foray for the first day being near Epping, and on the second day more in the neighbourhood of Loughton. It need not be said that the present is the worst year for fungi in our experience, owing to the dry summer succeeded by a cold autumn. Notwithstanding this, some interesting additions were made to the Epping Forest Flora. Of these we may enumerate—*Ag. (Coll.) confluens*, *Ag. (Pleur.) septicus*, *Ag. (Myc.) hæmatopus*, *Ag. (Crep.) mollis*, *Ag. (Ino.) eutheles*, *Ag. (Pan.) phalænarum*, *Cortinarius armillatus*, *Cortinarius talus*, *Cortinarius paleaceus*, *Marasmius erythropus*, *Boletus laricinus*, and *Clavaria contorta*, together with *Cortinarius decolorans*, and *Cortinarius evernius*. In the evening, after tea, a meeting was held, and several papers read.

**TUNBRIDGE WELLS NATURAL HISTORY SOCIETY.**—This Society had its first Fungus Foray this year in Buckhurst Park. The number of fungi collected was small, and these were afterwards exhibited in the rooms of the Literary Institution. Mr. Howse kindly forwarded a list of the principal species collected, none of which can be considered rare, and most of them the commonly and widely distributed species.

**HERTFORDSHIRE NATURAL HISTORY SOCIETY.**—The annual Fungus Foray and Cryptogamic Excursion took place on October 17th, in Bricket Wood, being, as heretofore, a Saturday half-day excursion. We have received no record of results.

**BIRMINGHAM NATURAL HISTORY SOCIETY.**—No regular mycological excursion was undertaken by this Society in the present autumn, but during a private excursion with two or three friends, in the neighbourhood of Kenilworth, we found *Agaricus (Stropharia) luteo-nitens*, Fr., for the first time in this country, of which figures will be given in the "Illustrations."

**WOOLHOPE CLUB.**—The annual meetings commenced on the evening of October 5th, and closed on the 9th. The excursion on Tuesday was made to Pontrilas, where several interesting species of *Cortinarius* were found, as well as *Ag. (Trich.) guttatus*—the latter only once before recorded for Britain. Wednesday was occupied by an excursion to Dinmore, the most interesting species collected being *Cortinarius dibaphus*. On Thursday, being the Club Day, the Foray was somewhat limited in results. Friday excursion was made in Haywood Forest. The most interesting species found during the week were *Cortinarius saturninus*, *Cortinarius privignus*, and *Cortinarius infractus*. The attendance was not so good as usual, and the specimens collected much fewer in number than in preceding years. Several papers were read, and discussions promoted at the evening meetings. Though Dr. Bull was present as usual, it was generally noted that he seemed far from well, and but little characterized by his wonted vigour and enthusiasm. How very few then present dreamt of the possibility that they would never look upon his face again. As we write, under a feeling of sadness, we cannot help the conviction that the city of Hereford, and the Woolhope Club, have sustained a heavy and irreparable loss in the friend and fellow-labourer whose sudden departure we mourn.

**HACKNEY NATURAL HISTORY SOCIETY.**—The annual Fungus Excursion on October 24th was made, as usual, in Epping Forest, and although some of the party spent the whole day in the Forest, many did not arrive until the afternoon. The number of species recorded was a little in excess of the record of last year, but very little addition was made to the record of the flora of the Forest, the most noteworthy being *Agaricus squarrosus*, var. *verruculosus*, *Cortinarius argentatus*, *Cortinarius saturninus*, and *Russula vesca*. Here, as elsewhere, the paucity of species and individuals was clearly manifest. White-spored Agarics were particularly scarce, and even the ubiquitous *Agaricus melleus* had comparatively few representatives. *Fistulina hepatica*, *Hydnum repandum*, and *Cantharellus cibarius* were not to be found at all.

**LEICESTER NATURAL HISTORY SOCIETY.**—The Botanical Section had their second annual Foray on Wednesday, October 28th, under much more favourable circumstances than last year. The number of species recorded was 116, of which a considerable number had not been previously recorded for Leicestershire; nothing particularly rare or novel was met with, although the locality was a promising one, and would probably yield very good results in a favourable season. In a note, adverting to the Foray, Mr. Mott remarked: "I found yesterday a quantity of *Agaricus (Tricholoma) personatus* being sold at a little greengrocer's shop in a back street in Leicester. I have never known it to be used here before." This is the species which has been alluded to by many authors as having been sold under the name of "Blewits" in Covent Garden Market, but we have never seen a specimen offered for sale in any part of the Metropolis.

## FUNGI OF MALAYAN PENINSULA.

*Determined by M. C. COOKE.*

The following collection, in the Kew Herbarium, has been forwarded by Dr. King, of Calcutta :—

- Agaricus* (*Clitocybe*) *laccatus*, *Scop.*, No. 1590.  
*Agaricus* (*Collybia*) *raphanipes*, *Berk.*, No. 6006.  
*Xerotus lateritius*, *B. & C.*, No. 3983.  
*Panus aureo-fulvus*, *Cooke*, No. 1893.  
*Lentinus velutinus*, *Fr.*, var. *lamellis confertissimis*, No. 2295.  
*Lentinus brevipes*, *Cooke*, No. 4342.  
*Lentinus exilis*, *Klotsch*, No. 2972.  
*Lentinus sajor-caju*, *Rumph.*, No. 2973.  
*Lentinus subnudus*, *Berk.*, No. 3976.  
*Lentinus blepharodes*, *Berk.*, No. 2988.  
*Lentinus inquinans*, *Berk.*  
*Lentinus tener*, *Klotsch*, No. 4388, 3202.  
*Lentinus Beccarianus*, *Ces.*, No. 3611, 3612.  
*Lentinus pergamenus*, *Lev.*, No. 2183, 2184.  
*Lenzites deplanata*, *Fr.*, No. 4727.  
*Lenzites platyphyllus*, *Cooke*, No. 4512.  
*Polyporus* (*Petaloides*) *grammocephalus*, *Berk.*, Nos. 3836, 2989, 1107, 4134.  
       "      "      var. *Emerici*, *Berk.*, No. 739, 3441 to 3444.  
       "      "      var. *russiceps*, *B.*, No. 4257.  
       "      "      var. *maculatus*, *C.*, No. 3343.  
*Polyporus* (*Petaloides*) *cochleariformis*, *Cooke*, No. 2821.  
*Polyporus* (*Lenti*) *alveolaris*, *Fr.*, No. 4863.  
*Polystictus* (*Discipedes*) *rigescens*, *Cooke*, No. 4818.  
*Fomes* (*Mesopodes*) *diabolicus*, *B.*, No. 1947.  
*Polystictus* (*Discipedes*) *Malaiensis*, *Cooke*, No. 5398.  
*Polystictus* (*Discipedes*) *microcylus*, *Zipp*, No. 910.  
*Polyporus* (*Hispidi*) *chrysites*, *Berk.*, No. 3837.  
*Polystictus* (*Sacri*) *sacer*, *Fr.*, No. 911. 1822.  
*Polystictus* (*Sacri*) *xanthopus*, *Fr.*, No. 1843.  
*Polystictus* (*Discipedes*) *dilatatus*, *Berk.*, No. 2799.  
*Polystictus* (*Discipedes*) *discipes*, *Berk.*, No. 3913, 4135.  
*Polystictus* (*Coriacei*) *vinosus*, *Berk.*, No. 2143.  
*Polystictus* (*Coriacei*) *brunneopictus*, *B.*, No. 5063.  
*Polystictus* (*Coriacei*) *squamiformis*, *B.*, No. 3682.  
*Polystictus* (*Prolificantes*) *Nilgherrensis*, *Mont.*, No. 2001.  
*Polystictus* (*Prolificantes*) *elongatus*, *B.*, No. 3665.  
*Polystictus* (*Coriacei* ?) *cupreo-roseus*, *B.*, No. 1867.  
*Polystictus latus*, *Berk.*, No. 740.  
*Trametes versatilis*, *Berk.*, No. 4607, 1239.



- Trametes lobata*, Berk., No. 4600, 5774.  
*Trametes cingulatus*, Berk., No. 3088.  
*Dædalea Andamanni*, Berk., No. 4161.  
*Hexagona polygramma*, Mont., No. 1894.  
*Hexagona tenuis*, Hook, No. 3342.  
*Favolus tessulatus*, Mont., No. 1192.  
*Cyclomyces fuscus*, Kunze, No. 4341.  
*Laschia tremellosa*, Fr., No. 3062.  
*Lachnocladium semivestitum*, B. & C., No. 4036.  
*Cladoderris dendritica*, Pers., No. 2166, 3133.  
*Stereum caperatum*, Berk., No. 943.  
*Stereum lobatum*, Kunze, No. 4864, 2056.  
*Stereum spadiceum*, Fr., No. 3604.  
*Dictyonema sericea*, Sw., No. 1543.  
*Hymenochæte subpurpurascens*, Berk., No. 791.  
*Phallus dæmonum*, Rumph, No. 3550, 4037.  
*Scleroderma vulgare*, Fr., No. 4000.  
*Mitremyces coccineus*, Berk., No. 3838.  
*Meliola amphitricha*, Fr., No. 2595.  
*Peziza* (*Trichoscypha*) *tricholoma*, Mont., No. 2633.

Together with some incomplete and imperfect fungi not determinable.

## VALSA VITIS, AGAIN.

By M. C. COOKE.

We have already attempted to clear up all doubts as to Schweinitz's *Sphæria* of the Vine (*Grevillea* v, 125), and yet the confusion in Saccardo's Sylloge is as great as ever. We will make yet another attempt on the basis of authentic specimens from Schweinitz himself. Surely there can be no better authority.

**Diatrype** (**Valsaria**) **viticola**, *S. Sphæria viticola*, Schwein. Syn. Car. p. 8, No. 64.

"Minor cum epidermide assurgens seriebus parallelis crescens griseo-nigra rugosa, sphæruleis nigris, stromate brunneo."

"Rara in ramis emortuis *Vitis rotundifoliæ*. Subpulvinata, sparsim nascens. Sphærule rariores duæ vel tres nigræ, in stromate brunneo splendente; singulæ cortice nigro, valde crasso." —*Schwein. loc. cit.* Sphæria (concrecentes) viticola, *Schwein. Syn. Amer. Bor.* No. 1290. *Diatrype viticola*, Berk. & Curt. *Amer. Fungi.* No. 854\*.

Sporidia oblong, elliptic, uniseptate, constricted slightly at the septum, .0006 in. long.—*Car. Inf.* No. 4975. *Herb. Berkeley.*

This we contend to be the *Sphæria viticola* (Schwein.); whether it is that of Montagne, we know not (see *Floræ d'Algerie*, pp. 463);

nor whether it is that of Saccardo's Sylloge, No. 2812. Since the diagnosis of the latter is so *amended* that it is not that of either Schweinitz or Montagne, whilst if the latter is supposed to be included, then the Algerian locality is not cited.

Under *Eutypa viticola* (Schw.), Saccardo, No. 669, quotes "Schwein. Syn. Car. No. 64, and Mont. Fl. Alg. p. 463, and V. vitis Schw. sec Cooke Valsei U.S. p. 113." To this we object that the *Sph. viticola* of Schwein. Syn. Car. is *not* *Eutypa*, with hyaline allantoid sporidia, but, according to Schweinitz's own specimens, brown uniseptate sporidia (= *Valsaria*). And yet it may be the species of Montagne, who evidently confounded the *Sphaeria vitis* of Schweinitz with his *Sph. viticola*. Probably the species in view is the *Sphaeria vitis* of Schweinitz, and that of "Cooke Valsei U.S." p. 113. But on what authority is Schweinitz's specific name of *vitis* changed to Montagne's *viticola*, only to confuse it with the *S. viticola* of Schweinitz.

The following is the *Sphaeria vitis* (Schw.):—

"Circinata, minor nigra, sphærule majusculis subtrinis coalitis librum elevantibus, ostiolis pulveraceis.

"Rarior in junioribus ramis *Vitiæ* in libro, ubi decorticati sunt. Tres vel quatuor sphærule majusculæ sub cortice interiori seu libro nidulant, corticem bullosum reddunt et in pustulam coalescent. Ostiola irregularia, subpulveracea, nigra."—Syn. Car. No. 117. Syn. Amer. Bor. No. 1362.

This is the *Valsa vitis*, Berk. and Curt. p. 171, under 869\*, which is entered twice in the North American Fungi as *Diatrype vitis* under 855\*, and as *Valsa vitis*, both of which refer to *Sphaeria vitis* (Schwein.), and to no other, and should stand as—

***Valsa (Eutypella) vitis*** (Schwein.), probably *Eutypa viticola*, Sacc. Syll. No. 669, *not* the *Valsa vitis* (Schw.?) Sacc. Syll. No. 449.

There are two species represented by specimens from Schweinitz, and none other. One is *Diatrype (Valsaria) viticola*, with uniseptate brownish sporidia; the other is *Valsa (Eutypella) vitis*, with most distinctly sulcate ostiola, called by Schweinitz "irregularia, subpulveracea."

*Valsa vitis* (Schw.), Saccardo No. 449, is *not* the species of Schweinitz at all, as we have already pointed out, but *Valsa vitigera* (Cooke), and we challenge Professor Saccardo to produce his evidence that this species was ever known to Schweinitz at all. It does not exist in any collection of American Fungi which we have ever examined. It is not to be found amongst specimens from Schweinitz in the Kew Herbarium or the Berkeley Herbarium, or in specimens communicated by Dr. Curtis as the *Sphaeria vitis* of Schweinitz, and we feel fully entitled to call for the direct evidence that the *Valsa vitis* of Saccardo is in any part the *Valsa vitis* of Schweinitz, even if found in the North American Continent at all.

***Diatrype (Valsaria) viticola***, Schw. *Sphaeria viticola*, Schwein. Syn. Car. p. 8, No. 64. Schwein. Amer. Bor. No. 1290. *Diatrype viticola*, Berk. & Curt. Amer. Fungi, No. 854\*. Herb. Berk. No. 8781. *Valsaria viticola*, Sacc. Syll. No. 2812.

**Valsa (Eutypella) vitis** (Schw.) Sphaeria vitis, *Schwein. Syn. Car.* No. 117. *Schwein. Amer. Bor.* No. 1362. *Valsa vitis*, *Cooke Valses U.S.* p. 113. *Berk. & Curt. Amer. Fungi* p. 171, No. 869\*. *Herb. Berk.* No. 8847. *Sphaeria viticola*, *Mont. Fl. Alg.* p. 463. *Eutypa viticola*, *Sacc. Syll.* No. 669. *Sphaeria propagata*, *Plow. Grev.* VII, 73. *Cryptosphaeria propagata*, *Sacc. Syll.* No. 687.

**Valsa vitigera**, *Cooke Grev.* v, p. 125. *Valsa vitis*, *Fekl. Symb. Myc.* 199. *Fungi. Rhen.* No. 607. *Sacc. Syll.* No. 449. *Sacc. Mycol. Ven.* p. 133, t. XIII, f. 19-21. *Myc. Ven.* No. 186.

## SYNOPSIS PYRENOMYCETUM.

(Continued from p. 17.)

1723. **Valsa (Eutypella) aleurina**, *B. & C. Herb. Berk.* 8925.

Pustulis convexis, orbicularibus, dense gregariis, erumpentibus, epidermide circum ostiola stellatam fissa. Peritheciis atris, in cortice nidulentibus, collis sulcatis convergentibus. Ascis clavatis, octosporis. Sporidiis allantoideis, hyalinis ( $\cdot 008$  mm. long).

On bark of *Platanus*. N. Carolina.

1726. **Valsa (Eutypella) constellata**, *B. & C. Herb. Berk.* 8832.

Pustulis orbicularibus, in lineas vel inordinate dispositis, erumpentibus, dense gregariis. Peritheciis atris, globosis, paucis (4-6), congestis, collis abbreviatis, ostiolo sulcato. Ascis clavatis, octosporis. Sporidiis allantoideis, hyalinis.

On branches of *Carya*, &c. N. Carolina.

1792. **Valsa (Euvalsa) pusio**, *B. & C. in Curt. Cat.* 142.

Pustulis parvulis, erumpentibus. Peritheciis atris, subglobosis, in cortice nidulantibus, epidermide fissurato cinctis; ostioliis subrugosis, brevibus, truncatis, in disco orbiculari emergentibus. Ascis clavatis, subsessilibus, octosporis. Sporidiis allantoideis, hyalinis, subfuscululis ( $\cdot 008 \times \cdot 002$  mm.) *Herb. Berk.* 8934.

On bark of *Morus multicaulis*. N. Carolina.

1793. **Valsa (Euvalsa) Mulleriana**, *Cooke.*

Pustulis convexis, erumpentibus, majusculis, suborbicularibus. Peritheciis atris, ovatis, sursum in collis lævibus productis, hinc illic cum macrostylosporibus in eadem pustulâ immixtis. Ascis clavatis, octosporis. Sporidiis inordinatis, allantoideis, hyalinis ( $\cdot 008 \times \cdot 002$  mm.), sæpe  $\cdot 01$  mm. long. Macrostylosporibus in eadem vel alteram pustulis, pyriformibus, 2-3 septatis, longitudinaliter divisus fuscis ( $\cdot 012\text{--}\cdot 014 \times \cdot 009$  mm.).

On oak branches. Eastbourne (C. J. Muller).

1864. **Valsa (Euvalsa) morigena**, *B. & C. Herb. Berk.* 8873.

Peritheciis globosis, linea nigra circumscripta, stromateque pallido, corticali immersis, demum crusta nigricata tectis, ostioliis in disco minuto, atro, subconfluentibus, prominulis. Ascis cylindrico-clavatis. Sporidiis allantoideis, hyalinis ( $\cdot 01 \times \cdot 002$  mm.).

On bark of *Morus multicaulis*. S. Carolina (Ravenal, 595; Curtis, 1895).

Pustules large, not unlike *Aglaospora profusa*, soon more or less throwing off the epidermis.

1865. **Valsa (Euvalsa) coryneoides**, B. & C. *Herb. Berk.* 8981.

Pustulis minimis, primo tectis, demum erumpentibus. Peritheciis paucis, subglobosis, in disco fuligineo compactis. Ascis clavatis. Sporidiis allantoideis, hyalinis ( $\cdot 01$ - $\cdot 012$  mm. long). = *Valsa thelebola*, Schwz. in Herb.

On bark of *Juniperus virginiana*. New Jersey.

1891. **Valsa (Euvalsa) subseriata**, Cooke.

Pustulis convexis, erumpentibus, subdiscoideis, 3-4, vix ultra, longitudinaliter seriatis. Peritheciis (10-16) subglobosis, sursum in ostioliis elongatis, lœvibus congestis. Ascis clavatis, breviter stipitatis. Sporidiis majusculis, allantoideis, hyalinis ( $\cdot 03 \times \cdot 006$  mm.).

On branches of *Fagus*. Shiere (Dr. Capron, 167).

1854. **Valsa (Euvalsa) pullula**, B. & C. *Herb. Berk.* 8978.

Pustulis parvulis, primo tectis (statu imperfecto in Herb. Berk.). Ascis clavatis, octosporis. Sporidiis cylindraceis, utrinque rotundatis, leniter curvulis (sæpe rectis) hyalinis ( $\cdot 008$  mm. long).

On twigs of *Castanea*. Pennsylvania (Michener).

2005. **Valsa (Chorostate) neglecta**, Duby MSS.

Stromata epidermide tecto, nigro nigrescentive, ovato aut globosa, in ramis junioribus nullo, receptaculis 6, compresso ovatis verticalibus dense congestis, basi applanatis; ostioliis exsertis, fragilibus, athermis, cylindricis, plus minus elongatis, truncato-papillatis, interdem inflexis, sæpe lateralibus. Ascis cylindricis, angustis. Sporidiis ovoideis, hyalinis, uniseriatis, nucleolatis, rarissime uniseptatis.—Duby in *Herb. Currey*.

Ad caules siccos *Genistæ tinctoria*.

2006. **Valsa (Chorostate) punctata**, Cooke.

Pustulis convexis, emergentibus, minimis. Peritheciis paucis in corticem nidulantibus, ostioliis brevibus, in disco orbiculari congestis. Ascis clavatis, breviter stipitatis, octosporis. Sporidiis biserialibus, ellipticis, rotundatis, medio uniseptatis, nec constrictis, hyalinis ( $\cdot 002 \times \cdot 007$  mm.).

On branches of *Tilia* and *Salix*. Edinbro'; Sydenham.

2007. **Valsa (Chorostate) œsculicola**, Cooke.

Pustulis orbicularibus, in lineas breves dispositis. Peritheciis subglobosis, atris, congestis, ostioliis cylindricis, convergentibus, lœvibus, emergentibus. Ascis clavatis. Sporidiis biserialibus, fusoides, quadrinucleatis, demum uniseptatis, hyalinis ( $\cdot 02 \times \cdot 004$  mm.).

On branches of *Æsculus*. Sydenham.

2008. **Valsa (Chorostate) Bloxami**, Cooke.

Pustulis convexis, emergentibus. Peritheciis (12-20) congestis, pyriformibus, in collum elongatum productis, pulvere aureo-fulvo obductis; disco orbiculari fusco. Ascis cylindricis, octosporis. Sporidiis uniserialibus, ellipticis vel sublanceolatis, medio uniseptatis, leniter constrictis, hyalinis ( $\cdot 022 \times \cdot 006$  mm.).

On branches of *Fagus*? Twycross (Bloxam 141).

**2009. Valsa (Chorostate) olivæstroma, Cooke.**

Erumpens. Pustulis sub-epidermide nidulantibus. Peritheciis (6-10) in circulos dispositis, stromate olivaceo pulveraceo insidentibus, collis subelongatis convergentibus. Ascis clavatis, octosporis. Sporidiis subuniseriis lanceolatis, medio uniseptatis, leniter constrictis, hyalinis ( $\cdot 026 \cdot 028 \times \cdot 008$  mm.).

On branches of *Cerasus avium*. Jedburgh (Jerdon).

**2010. Valsa (Chorostate) fuscidula, Cooke.**

Pustulata, fusca. Pustulis erumpentibus convexis, subpulveraceis. Peritheciis paucis, immersis, collis elongatis, convergentibus, demum punctato-emergentibus. Ascis clavatis, breviter stipitatis, octosporis. Sporidiis inordinatis, arcute fuscoideis, binucleatis, demum uniseptatis, hyalinis ( $\cdot 018 \cdot 02 \times \cdot 0035$  mm.).

On oak twigs.

**Pseudovalsa (Valsaria) cratægi (Winter, sub. nom. Diaporthe cratægi, Nke. in Herb., Cooke.)**

Stroma valsoideum. Sporidiis sub-uniseriis, ellipticis, uniseptatis, pallide fuscis ( $\cdot 016 \cdot 018 \times \cdot 006$  mm.).

On *Cratægus*.

**Pseudovalsa (Valsaria) Caproni, Cooke.**

Pustulis in ligno immersis. Peritheciis subglobosis, atris, circinantibus, sursum in collis brevibus convergentibus productis. Ascis cylindraceis, octosporis. Sporidiis uniseriis, ellipticis, medio uniseptatis, nec constrictis, fuscis ( $\cdot 015 \times \cdot 005$  mm.).

On denudated oak wood. Shere (*Capron*, 44).

**2104. Pseudovalsa tubulosa, B. & C. Sacc. Syll. 3358.**

This includes also *Calospora tribulosa*, Sacc. Syll. 3699, which is founded on a misprint in North Am. Fungi, No. 877.

**2133. Fenestella hormospora, Cooke. Valsa hormospora, Berk. & Curt. in Herb. No. 8982. Valsa (circinata) conjuncta, Schwein. (neo Fries), Amer. Bor. No. 1383.**

Peritheciis paucis, in circulos irregulares confertis, disco erumpente orbiculari albido pulverulento, ostioliis brevibus, subconjunctis. Ascis amplis, clavatis. Sporidiis sub-ellipticis, utrinque muticis, medio constrictis, 5 septatis, demum merenchymaticis, fuscis.

On branches. Bethlehem.

**2132. Fenestella callispora, Cooke. Sphæria callispora Duby in Herb. Currey.**

Immersa, pustulata, erumpens, epidermide fissa tecta. Peritheciis paucis, minutissimis, globosis, congestis, ostioliis subnullis. Ascis clavatis. Sporidiis elliptico acuminatis, magnis, biserialibus quinquesepatis, muriformibusque, luteo-fuscis ( $\cdot 03 \cdot 04 \times \cdot 018$  mm.).

On branches of *Broussonetia papyrifera* Geneva.

**2135. Fenestella (Clethridium) schistostroma (Duby), Cooke. Sphæria schistostroma, Duby. in Rabh. Fungi, Eur. No. 53, Sacc. Syll. No. 4504.**

Immersa, demum erumpens, epidermide cincta. Peritheciis 5-15 aggregatis, ovatis verticalibus inclinatisve, stromate nigro inæquabili primum compacto, demum in fragmenta plora diffisso tectis, ostioliis vix prominulis saepe obsoletis. Ascis cylindrico-elongatis rigidis.

Sporidiis uniserialibus ovoideo-ellipsoideis, primo uni-demum 3-5 septatis, et tandem merenchymaticis, hyalinis ( $0.2 \times 0.1$  mm.). *Duby.*

On branches of *Ribes aureus*. Geneva.

*Fam.* 6. **VALSEÆ**. *Compositæ*. Stroma e matrice mutata formatum. Perithecia discreta, circinantia, vel monosticha.

*GEN.* 1. **VALSA**, *Fries.* Perithecia cortice immersa in acervulos aggregata, in circulum simplicem v. compositum disposita; ostiolis convergentibus, erumpentibus et discum efformantibus; sporidiis hyalinis, continuis septatisve.

A. Sporidia allantoidea, hyalina.

*SUB-GEN.* 1. **VALSELLA**, *Fckl.* Perithecia cortice v. ligno immersa. Asci polyspori.

1652. amphoraria, <i>Ntke.</i>	602	1661. clopima, <i>Fr.</i>	... 611
1653. furva, <i>Karst.</i>	... 603	1662. fertilis, <i>Ntke.</i>	... 612
1654. Laschii, <i>Ntke.</i>	... 604	1663. leptostroma, <i>Fckl.</i>	613
1655. cydoniæ, <i>Rehm.</i>	... 605	1664. clypeata, <i>Fckl.</i>	... 614
1656. minima, <i>Niessl.</i>	... 606	1665. myriothechia, <i>Pass.</i>	615
1657. salicis, <i>Fckl.</i>	... 607	1666. polyspora, <i>Ntke.</i>	... 616
1658. adhærens, <i>Fckl.</i>	... 608	1667. melastoma, <i>Fr.</i>	... 617
1659. nigro-annulata, <i>Fckl.</i>	609	1668. papyrifera, <i>Schw.</i>	4184
1660. rosæ, <i>Fckl.</i>	... 610		

*SUB-GEN.* 2. **CORONOPHORA**, *Fckl.* Perithecia subperidermio relaxato sublibera. Asci polyspori.

1669. gregaria, <i>Lib.</i>	... 413	1675. Nitschkei, <i>Sacc.</i>	... 419
1670. angustata, <i>Fckl.</i>	... 414	= myriospora, <i>Ntke.</i>	
1771. macrosperma, <i>Fckl.</i>	415	1676. consobrina, <i>Karst.</i>	... 420
1672. abietina, <i>Fckl.</i>	... 416	1677. rosarum, <i>Crouan.</i>	... 421
1673. abieticola, <i>Crouan.</i>	417	1678. myriospora, <i>D.R. &amp; M.</i>	422
1674. annexa, <i>Ntke.</i>	... 418	1679. ootheca, <i>B. &amp; C.</i>	... 423
		1680. Broomeiana, <i>Berk.</i>	... 424

*SUB-GEN.* 3. **EUTYPELLA**, *Sacc.* Perithecia cortice v. ligno immersa. Ostiola sulcata. Asci octospori.

1681. isariphora, <i>Ntke.</i>	... 563	1693. Brunaudiana, <i>Sacc.</i>	575
1682. cerviculata, <i>Fr.</i>	... 564	1694. ventriosa, <i>C. &amp; E.</i>	576
1683. padi, <i>Karst.</i>	... 565	1695. ailanthi, <i>Sacc.</i>	... 577
1684. prunastri, <i>Fr.</i>	... 566	1696. radula, <i>Pers.</i>	... 578
1685. ventricosa, <i>Fckl.</i>	... 567	(= grandis, <i>Ntke.</i> )	
1686. sorbi, <i>Schm.</i>	... 568	1697. elegans, <i>Niessl.</i>	... 579
1687. pentagona, <i>Pers.</i>	... 569	1698. extensa, <i>Fr.</i>	... 580
1688. rhizophila, <i>Ntke.</i>	... 570	1699. confluens, <i>Ntke.</i>	... 581
1689. stellulata, <i>Fr.</i>	... 571	= Morthieri, <i>Sacc.</i>	5900
1690. angulosa, <i>Ntke.</i>	... 572	1700. atropæ, <i>Mont.</i>	... 582
1691. similis, <i>Karst.</i>	... 573	1701. juglandis, <i>Schw. herb.</i>	
1692. alnifraga ( <i>Wahl.</i> )	574	1702. juglandina, <i>C. &amp; E.</i>	583

1703. *fraxinicola*, *C. & Peck.* 584  
 1704. *Leaiana*, *Berk.* ... 585  
 1705. *berchemiæ*, *Cke.* ... 586  
 1706. *goniostoma* (*Schw.*),  
     *B. & C.* ... 587, 4189  
 1707. *exanthemoides*, *Mont.* 588  
 1708. *microspora*, *C. & Plow.* 589  
 1709. *monticulosa*, *B. & C.* 591  
 1710. *platani*, *Schw.* ... 592  
 1711. *tumidula*, *C. & Peck.* 593  
 1712. *Tosquetii*, *West.* 594  
 1713. *tetraploa*, *B. & C.* 595  
 1714. *rugiella*, *C. & E.* ... 596  
 1715. *corynostoma*, *B. & Rav.* 597  
 1716. *innumerabilis*, *Peck.* 598  
 1717. *Bonariensis*, *Speg.* 599  
 1718. *venusta*, *Ellis* ... 5901  
 1719. *anthracina*, *Speg.* ... 600  
 1720. *lutescens*, *Ellis* ... 5902  
 1721. *paradisica*, *Speg.* 601  
 1722. *niphoclina*, *Cke.* ... 5903  
 1723. *aleurina*, *B. & C. Grev.* xiv  
     46  
 1724. *Halseyana*, *Schw.* 4188  
 1725. *vitis*, *Schw.* 669 p.p.  
 1726. *constellata*, *B. & C. Grev.*  
     xiv. 46

SUB-GEN. 4. LEUCOSTOMA, *Ntke.* Discus sæpius albus, v. cinereus, v. flavidus. Ostiola nec subcata. Asci octospori.

1727. *nivea* (*Hoffm.*) ... 533  
 1728. *Auerswaldii*, *Ntke.* 534  
 1729. *Massariana*, *DeNot.* 535  
 1730. *excipienda*, *Karst.* ... 536  
 1731. *leucostoma*, *Pers.* ... 537  
 1732. *Kunzei*, *Fries.* ... 538  
 1733. *strobi*, *Pass.* ... 539  
 1734. *superficialis*, *Ntke.* ... 540  
 1735. *duriuscula*, *Oth.* ... 541  
 1736. *diatrypa*, *Fries.* ... 542  
 1737. *præstans*, *B. & C.* ... 462  
 1738. *aquifolii*, *Ntke.* ... 543  
 1739. *translucens*, *DeNot.* 544  
 1740. *cincta*, *Fries.* ... 545  
 1741. *lauro-cerasi*, *Tul.* ... 546  
 1742. *ceuthosporæ*, *Cke.* ... 547  
 1743. *abrupta*, *Cke.* ... 548  
 1744. *crocina*, *Mont.* ... 549  
 1745. *caryogena*, *B. & C.* 550  
 1746. *orbicula*, *B. & C.* ... 551  
 1747. *chlorodisca*, *C. & E.* 552  
 1748. *fulvella*, *B. & Rav.* 553  
 1749. *linderæ*, *Peck.* ... 554  
 1750. *infinitissima*, *Kalch.*  
     *& Cke.* ... 555  
 1751. *munda*, *B. & C.* ... 556  
 1752. *mesoleuca*, *B. & C.* ... 557  
 1753. *subclypeata*, *C. & Pk.* 490  
 1754. *viburni*, *Fckl.* ... 558  
 1755. *tessella*, *Fr.* ... 559  
 1756. *Welwitschii*, *Berk.* 560  
 1757. *colliculus*, *Worm.* ... 562

SUB-GEN. 5. EUVALSA, *Ntke.* Discus sæpius ater. Ostiola nec sulcata. Asci octospori.

\* MICROSPORÆ. *Sporidia viz 8 mm. longa.*

1758. *ceratophora*, *Tul.* ... 429  
     v. *rosarum*, *Not.*  
 1759. *coronata*, *Hoffm.* ... 433  
     v. *melanosticta*, *M.*  
 1760. *cenisia*, *DeNot.* ... 434  
     v. *invalida*, *K.*  
 1761. *abietis*, *Fr.* ... 437  
     v. *ceratina*, *Fr.*  
 1762. *pini*, *Ass. & C.* ... 443  
 1763. *decumbens*, *Schm.* 446  
 1764. *cristata*, *Ntke.* ... 451  
 1765. *haustellata*, *Fr.* ... 463  
 1766. *ramnicola*, *Fab.* ... 467  
 1767. *subcuticularis*, *C. & E.* 470  
 1768. *pulchelloidea*, *C. & E.* 471  
 1769. *parasitica*, *C. & E.* 484  
 1770. *quercina*, *Curr.* ... 472  
 1771. *demissa*, *Ntke.* ... 474  
 1772. *excorians*, *C. & E.* 479  
 1773. *Stephania*, *Pass.* ... 481  
 1774. *nepalensis*, *Berk.* ... 485  
 1775. *delicatula*, *C. & E.* 489

1776. glandulosa, *Cke.*... 494    1786. indistincta, *Schw.* 4187  
 1777. lavateræ, *C. & Hk. Grev.* 8.    1787. conspurcata, *Schw.* 4193  
 1778. gossypina, *Cke.* ... 496    1788. deformis, *Fr.* ... 4201  
 1779. echidna, *Cke.* ... 498    1789. rimicola, *Schw.* ... 4214  
 1780. erinacea, *B. & Rav.* 1496    1790. syngenesia, *Fr.* ... 511  
 1781. microspora, (*Cr.*)... 500    1791. Sallei, *Berk.* ... 4177  
 1782. macluræ, *C. & E.* 501    1792. pusio, *B. & C. Grev.* xiv. 46  
 1783. agnostica, *Cke. Grev.* xiii. 17.    1793. Mulleriana, *Cke. Grev.* xiv. 46  
 1784. juglandicola, *Schw.* 4173    1793\* lupini, *C. & Hk. Grev.* xiv. 8  
 1785. variolaria, *Schw.*... 4180

\* MESOSPORÆ. *Sporidia* 8-12 mm.

1794. rubi, *Fckl.* ... 430    1827. liquidambaris, *Schw.* 477  
 1795. cænobitica, *Ces.* ... 431    1828. sorbicola, *Ntke.* ... 478  
 1796. coacta, *S. & Sp.* ... 432    1829. concamerata, *Curr.* 480  
 1797. sabalina, *Cke.* ... 435    1830. nyssæ, *Cke.* ... 482  
 1798. strobiligena, *Sacc. & R.* 436    1831. præclara, *Mont.* ... 483  
 1799. microstoma, *Pers.* 438    1832. anomia, *Schw.* ... 486  
 1800. Fuckelii, *Ntke.* ... 440    1833. ligustrina, *Cke.* ... 487  
 1801. affinis, *Ntke.* ... 441    1834. juniperina, *Cke.* ... 488  
 1802. fallax, *Ntke.* ... 442    1835. rhoiphila, *C. & E.* 493  
 1803. leiphemoides, *B. & C.* 444    1836. campospora, *Mont.* 495  
 1804. insignis, *Ntke.* ... 445    1837. eucalypti, *Cke.* ... 497  
 1805. Schweinitzii, *Ntke.* 447    1838. monadelpha, *Fr.*... 499  
 1806. syringæ, *Ntke.* ... 448    1839. pseudoplatani, *Fr.* 502  
 1807. vitigera, *Cke.* ... 449    1840. decidua, *C. & E.*... 503  
     = *vitis*, *Sacc.*    1841. subscripta, *Fr.* ... 504  
 1808. verrucula, *Ntke.* ... 450    1842. stenospora, *Tul.* ... 505  
 1809. Spegazziniana, *Sacc.* 452    1843. alni, *Peck.* ... 506  
 1810. ribesia, *Karst.* ... 453    1844. subcongrua, *Rehm. Asc.*  
 1811. exigua, *Ntke.* ... 454    1845. americana, *B. & C.* 507  
 1812. horrida, *Ntke.* ... 455    1846. truncata, *C. & Pk.* 508  
 1813. Hoffmanni, *Ntke.* 456    1847. acclinis, *Fr.* ... 510  
 1814. oxystoma, *Rehm.*... 457    1848. tenella, *Fab.* ... 5895  
 1815. Friesii, *Duby.* ... 458    1849. diatrypoides, *Rehm.* 5899  
 1816. incrustata, *Ntke.*... 459    1850. myricæ, *C. & E.*... 590  
 1817. intermedia, *Ntke.* 460    1851. cathartocarpi, *Lev.* 4178  
 1818. sordida, *Ntke.* ... 461    1852. rubincola, *Schw.* ... 4181  
 1819. mendax, *Mont.* ... 464    1853. radicum, *Schw.* ... 4182  
 1820. multiplex, *C. & E.* 465    1854. pullula, *B. & C. Grev.* xiv. 47  
 1821. terebinthi, *Fab.* ... 466    1855. quadrifida, *Schw.* 4183  
 1822. perfodiens, *Ntke.*... 468    1856. modesta, *Schw.* ... 4186  
 1823. accedens, *Sacc.* ... 469    1857. conseptata, *Schw.* 4191  
 1824. cornicola, *Cke.* ... 473    1858. aractina, *Fr.* ... 4198  
 1825. Dubyi, *Ntke.* ... 475    1859. rhizina, *Schw.* ... 4215  
 1826. decorticans, *Fr.* ... 476



**\*\* MACROSPORÆ. Sporidia 12 mm. excedente.**

1860. mediterranea, <i>DeNot.</i> 439	1876. pustulata, <i>Awd.</i> ... 523
1861. conscripta, <i>C. &amp; E.</i> 491	1877. taxi, <i>Fckl.</i> ... 524
1862. clausa, <i>C. &amp; E.</i> ... 492	1878. pauperata, <i>C. &amp; E.</i> 525
1863. punica, <i>S. &amp; Sp.</i> ... 509	1879. co-operta, <i>Cooke</i> ... 526
1864. morigena, <i>B. &amp; C. Grev.</i> xiv. 46	1880. dolosa, <i>Fr.</i> ... 527
1865. coryneoides, <i>B. &amp; C. Grev.</i> xiv. 47	1881. laurina, <i>C. &amp; E.</i> ... 528
1866. ambiens, <i>Fr.</i> ... 512	1882. rhodophila, <i>B. &amp; Br.</i> 529
1867. populina, <i>Fckl.</i> ... 513	1883. Fabreana, <i>Sacc.</i> ... 530
1868. salicina, <i>Pers.</i> ... 514	1884. inclinis, <i>Sacc.</i> ... 531
1869. Curreyi, <i>Ntke.</i> ... 516	= <i>acclinis</i> , <i>Schw.</i>
1870. cypri, <i>Tul.</i> ... 517	1885. conoidea, <i>Rehm.</i> ... 5897
1871. betulina, <i>Ntke.</i> ... 518	1886. orni, <i>Rehm.</i> ... 5898
1872. germanica, <i>Ntke.</i> ... 519	1887. ceanothi, <i>Schw.</i> ... 4192
1873. obtecta, <i>C. &amp; E.</i> ... 520	1888. expers, <i>Schw.</i> ... 4213
1874. olivacea, <i>Fckl.</i> ... 521	1889. aperta, <i>Fr. Grev.</i> xiii. 40
1875. sepincola, <i>Fckl.</i> ... 522	1890. dryophila, <i>Niessl.</i> <i>Rabh. F. E.</i> 1941
	1891. subseriata, <i>Cooke Grev.</i> xiv. 47

**SUB-GEN. 6. QUATERNARIA, Tul. Perithecia quaterna v. pauca.**

1892. Persoonii, <i>Tul.</i> ... 425	1895. regularis, <i>Ntke.</i> ... 428
= <i>quaternata</i> , <i>Fr.</i>	1896. megas, <i>Awd. in Rab. F. E.</i> 815
1893. dissepata, <i>Fr.</i> ... 426	1897. abnormis, <i>Fr.</i> ... 4208
1894. Morthieri, <i>Fckl.</i> ... 427	

**SUB-GEN. 7. CALOSPHÆRIA, Tul. Perithecia sub-peridermio relaxato sublibera.**

**a. Eu-calosphæria. Peritheciis rostellatis.**

**\* Perithecia glabra.**

1898. pulchella, <i>P.</i> ... 391	1903. corylina, <i>Ntke.</i> ... 396
= <i>princeps</i> , <i>Tul.</i>	1904. dryina, <i>Curr.</i> ... 397
1899. ciliatula, <i>Fr.</i> ... 392	1905. microtheca, <i>C. &amp; E.</i> 398
1900. pusilla, <i>Wahl.</i> ... 393	1906. macrospora, <i>Wint.</i> 399
1901. assecia, <i>Schw.</i> ... 394	1907. cylindrica, <i>K. &amp; C.</i> 400
1902. parasitica, <i>Fckl.</i> ... 395	1908. capillaris, <i>S. &amp; P.</i> 5894

**\*\* Perithecia villosula v. furfurilla.**

1909. tædiosa, <i>Sacc.</i> ... 401	1912. affinis, <i>Ntke.</i> ... 404
1910. villosa, <i>Ntke.</i> ... 402	1913. obvoluta, <i>Karst.</i> ... 405
1911. aurata, <i>Ntke.</i> ... 403	1914. scabriseta, <i>Schw.</i> ... 406
= <i>biformis</i> , <i>Tul.</i>	

**b. Erostellia. Peritheciis erostratis.**

**\* Perithecia glabra.**

1915. vasculosa, <i>Sacc.</i> ... 407	1918. tumidula, <i>Sacc.</i> ... 410
1916. recedens, <i>Niessl.</i> ... 408	1919. vibratilis, <i>Fr.</i> ... 411
1917. minima, <i>Tul.</i> ... 409	

\*\* *Perithecia hirsuta.*1920. *jungens, Nike.* ... 412B. *Sporidia ovata vel fusioidea, vel bacillaria.*SUB-GEN. 8. CRYPTOSPORELLA, *Sacc.* *Sporidia ovata, v. fusioidea.*

- |  |  |
|--|--|
| 1921. <i>hypoderma, Fr.</i> ... 1801       | 1932. <i>Niesslii, Kunze</i> ... 1812      |
| 1922. <i>Limminghii, Kickx</i> 1802        | 1933. <i>innata, B. &amp; C.</i> ... 1814  |
| 1923. <i>aurea, Fckl.</i> ... 1803         | 1934. <i>albo-fusca, C. &amp; E.</i> 1815  |
| = <i>amygdalina, Cooke.</i>                | 1935. <i>Ehrenbergii, Tul.</i> 1816        |
| 1924. <i>Daldiniana, Not...</i> 1804       | 1936. <i>platanigera, B &amp; Br.</i> 1817 |
| 1925. <i>chondrospora, Ces.</i> 1805       | 1937. <i>foraminula, Pers....</i> 1818     |
| 1926. <i>populina, Fckl.</i> ... 1806      | 1938. <i>phomaspora, C. &amp; E.</i> 2439  |
| 1927. <i>veneta, Sacc.</i> ... 1807        | 1939. <i>macrostoma, Rehm.</i> 561         |
| 1928. <i>æsculi, Fckl.</i> ... 1808        | 1940. <i>ampelopsidis, Ellis</i> 6025      |
| 1929. <i>compta, Tul.</i> ... 1809         | 1941. <i>divergens, Schw.</i>              |
| 1930. <i>sphaerostoma, Nike.</i> 1810      | <i>Grev. xiii.</i> , 40                    |
| 1931. <i>leptasca, C. &amp; P....</i> 1811 | 1942. <i>mahaleb, C. &amp; E.</i> 532      |

SUB-GEN. 9. CRYPTOSPORA, *Tul.* *Sporidia bacillaria.*

- |  |  |
|--|--|
| 1943. <i>suffusa, Fr.</i> ... 4116     | 1948. <i>cinctula, Cke. &amp; Pk.</i> 4121 |
| 1944. <i>femoralis, Peck.</i> ... 4117 | 1949. <i>trichospora, C. &amp; P.</i> 4122 |
| 1945. <i>rhabdospora, Not...</i> 4118  | 1950. <i>tiliæ, Tul.</i> ... 4123          |
| 1946. <i>intexta, Curr..</i> ... 4119  | 1951. <i>betulæ, Tul.</i> ... 4124         |
| 1947. <i>corylina, Tul.</i> ... 4120   | 1952. <i>vasculosa, Schw....</i> 4203      |
| = <i>versatilis, Fr....</i> 4144       | 1953. <i>umbilicata, Pers....</i> 4210     |

C. *Sporidia uni-vel pluri-septata.*SUB-GEN. 10. CHOROSTATE, *Nike.* *Sporidia uniseptata.*

- |  |   |
|--|---|
| 1954. <i>conjuncta, Nees.</i> ... 2353     | 1974. <i>albo-velata, B. &amp; C.</i> 2381  |
| 1955. <i>Kunzeana, Sacc....</i> 2354       | 1975. <i>Woolworthii, Peck.</i> 2383        |
| 1956. <i>bitorulosa, B. &amp; Br.</i> 2355 | 1976. <i>dryophila, Nssl.</i> ... 2384      |
| 1957. <i>decipiens, Sacc.</i> ... 2356     | 1977. <i>leiphemia, Fr.</i> ... 2385        |
| 1958. <i>carpini, Pers.</i> ... 2357       | 1978. <i>quercina, Fckl.</i> ... 2386       |
| 1959. <i>mucosa, Wint.</i> ... 2358        | 1979. <i>Robergeana, Desm.</i> 2388         |
| 1960. <i>longirostris, Tul....</i> 2359    | 1980. <i>ocularia, C. &amp; E....</i> 2389  |
| 1961. <i>mamiana, Sacc.</i> ... 2360       | 1981. <i>pulchra, Curr.</i> ... 2390        |
| 1962. <i>Niesslii, Sacc.</i> ... 2361      | 1982. <i>paulula, C. &amp; E....</i> 2391   |
| 1963. <i>aceris, Fckl.</i> ... 2363        | 1983. <i>patria, Speg.</i> ... 2392         |
| 1964. <i>albobincta, C. &amp; P.</i> 2364  | 1984. <i>impulsa, C. &amp; P....</i> 2395   |
| 1965. <i>acerina, Peck.</i> ... 2365       | 1985. <i>furfuracea, Fr.</i> ... 2396       |
| 1966. <i>myinda, C. &amp; E....</i> 2368   | 1986. <i>fibrosa, Pers.</i> ... 2397        |
| 1967. <i>hippocastani, Cooke, Grev.</i>    | 1987. <i>extensa, Fr.</i> ... 2398          |
| xiii. 98                                   | 1988. <i>faginea, Curr.</i> ... 2399        |
| 1968. <i>Oudemansii, Sacc.</i> 2369        | 1989. <i>euryala, Mont.</i> ... 2400        |
| 1969. <i>oncostoma, Duby....</i> 2370      | 1990. <i>decorticans, Lib....</i> 2402      |
| 1970. <i>personata, C. &amp; E.</i> 2371   | 1991. <i>difficilior, Kunze....</i> 2403    |
| 1971. <i>enteroleuca, Fr.</i> ... 2372     | 1992. <i>tuberculosa, Ellis.,</i> 2404      |
| 1972. <i>transversalis, Karst.</i> 2373    | 6495  |
| 1973. <i>sociata, C. &amp; E.</i> ... 2378 | 1993. <i>fulvopruninata, B &amp; C</i> 2407 |

- |  |   |
|--|---|
| 1994. <i>ailanthi</i> , Sacc. ... 2408         | 2005. <i>neglecta</i> , Duby., Grev. xiv. 47    |
| 1995. <i>apocrypta</i> , C. & E. 2409          |   |
| 1996. <i>lixivia</i> , Fr. ... 2410            | 2006. <i>punctata</i> , Cooke, Grev. xiv. 47    |
| 1997. <i>bicincta</i> , C. & P.... 2411        |   |
| 1998. <i>corymbosa</i> , C. & E. 2412          | 2007. <i>æsculicola</i> , Cooke, Grev. xiv. 47  |
| 1999. <i>binoculata</i> , Ellis ... 6093       |   |
| 2000. <i>tecta</i> , Cooke. ... 6091           | 2008. <i>Bloxami</i> , Cooke, Grev. xiv. 47     |
| 2001. <i>leucopsis</i> , Fr. ... 6094          |   |
| 2002. <i>stictostoma</i> , Ellis 6096          | 2009. <i>olivæstroma</i> , Cooke, Grev. xiv. 48 |
| 2003. <i>cercophora</i> , Ellis... 6097        |   |
| 2004. <i>marchica</i> , Rehm, Sydow, Exs. 553. | 2010. <i>fuscidula</i> , Cooke, Grev. xiv. 48   |

CHOROSTELLA. *Sporidia appendiculata*.

- |   |   |
|---|---|
| 2011. <i>hystricula</i> , S. & Sp. 2417 | 2019. <i>taleola</i> , Fr. ... 2426     |
| 2012. <i>castanea</i> , Tul. ... 2418   | 2020. <i>oxyspora</i> , Peck. ... 2427  |
| 2013. <i>leiphemoides</i> , Fckl. 2419  | 2021. <i>nidulans</i> , Nssl. ... 2428  |
| 2014. <i>sulphurea</i> , Fckl. ... 2421 | 2022. <i>obscura</i> , Peck. ... 2429   |
| 2015. <i>affinis</i> , Sacc. ... 2422   | 2023. <i>Saccardiana</i> , Kunze 2430   |
| 2016. <i>decedens</i> , Fr. ... 2423    | 2024. <i>perjuncta</i> , Nsl. ... 2431  |
| 2017. <i>tessera</i> , Fr. ... 2424     | 2025. <i>tessella</i> , Pers. ... 2432  |
| 2018. <i>syngenesia</i> , Fr. ... 2425  | 2026. <i>glyptica</i> , B. & C.... 2433 |
| = <i>appendiculosa</i> , Awd.           | 2027. <i>mucronata</i> , Peck. 2434     |
| = <i>frangula</i> , Pers.               | 2028. <i>galericulata</i> , Tul. 2435   |

DUBIÆ.

- |   |  |
|---|--|
| 2029. <i>chrysoides</i> , Tul. ... 2436 | 3032. <i>innata</i> , B. & C. ... 2440 |
| 2030. <i>convexa</i> , Pr. ... 2437     | 2033. <i>tortuosa</i> , Fr. ... 2441   |
| 2031. <i>castriformis</i> , Pr.... 2438 | 2034. <i>ciliata</i> , Pers. ... 2442  |

SUB-GEN. 11. CALOSPORA, Sacc. *Sporidia triseptata*.

- |  |   |
|--|---|
| 2035. <i>stilbostoma</i> , Cooke 2382    | 2043. <i>pennsylvanica</i> , B. & C. ... 3700 |
| = <i>rhois</i> , Cooke                   |   |
| 2036. <i>detrusa</i> , Fr. ... 2401      | 2044. <i>secedens</i> , M. & Fr. 3701         |
| 2037. <i>cratægi</i> , Curr. ... 2405    | 2045. <i>aculeans</i> , Schw. ... 3703        |
| 2038. <i>platanoides</i> , Pers. 3695    | <i>rufescens</i> , Schw.                      |
| 2039. <i>Innesii</i> , Curr. ... 3696    | 2046. <i>gemmata</i> , B. & C. 3704           |
| 2040. <i>capsularis</i> , Pers. ... 3697 | 2047. <i>inconspicua</i> , C. & E. 3706       |
| 2041. <i>Zopfii</i> , Kunze ... 3698     | 2048. <i>aglæostoma</i> , B. & Br. 3357       |
| 2042. <i>pustulata</i> , Desm.... 2362   | 2049. <i>strumellæformis</i> , Not. ... 2377  |

GEN. 2. **MELANCONIS**, Tul. Sacc. Syll. I., 602. *Stroma valseum nigricans* v. *flavidum*. *Perithecia circinantia*. *Sporidia uniseptata*, *hyalina* v. *fusca*. Status conidicus *Melanconium* sistens.

a. EU-MELANCONIS. *Sporidiis muticis, hyalinis*.

- |   |  |
|---|--|
| 2050. <i>stilbostoma</i> , Fr. ... 2343 | 2052. <i>carthusiana</i> , Fckl. 2345  |
| 2051. <i>modonia</i> , Fr. ... 2344     | 2053. <i>fennica</i> , Karst. ... 2346 |

2054. *asteropycnis*, Cr. 2347    2057. *Everhardtii*, Ell. Torr.  
 2055. *dolosa*, Fr. ... 2348    Cl., 1883, 117  
 2056. *alniella*, Rehm. Asco. 148

*b. MELANCONIDIUM.* Sporidiis appendiculatis, hyalinis.

2058. *Alni*, Tul. ... 2349    2060. *occulta*, Fr. ... 2351  
 2059. *thelebola*, Fr. ... 2350

*c. MELANCONIELLA.* Sporidiis fuscis.

2061. *spodiæi*, Tul. ... 2805    2066. *Meschuttii*, Ell. & Ev.  
 2062. *chrysostroma*, Fr. 2806    Bull. Torr. Cl., 1883, 117  
 2063. *leucostroma*, Niessl. 6122    2067. *biansata*, Ell. & Ev. Bull.  
 2064. *decorahensis*, Ell. 6123    Torr. Cl., 1883, 118  
 2065. *apocrypta*, Ell. ... 6124

*d. HERCOSPORA*, Fr. Pycnidium *Rabenhorstiam* sistens.

2068. *Tiliæ*, Fr. ... 2352

GEN. 3. **PSEUDOVALSA**, Not. Stroma valsiforme, innatum.  
 Sporidia plerumque septata, fusca.

\* Sporidia continua, hyalino-apiculata.

2069. *amygdalina*, Cooke 1147

\* VALSARIA. Sporidia uniseptata.

2070. *celtidis*, Cooke ... 2808    2083. *nigrificata*, C. & E. 2834  
 2071. *Notarisii*, Mont. ... 2810    2084. *durissima*, Fckl. ... 2835  
 2072. *Kunzeiana*, Not. ... 2815    2085. *fædans*, Karst. ... 2836  
 2073. *parmularia*, Berk. ... 2816    2086. *Niesslii*, Wint. ... 2837  
 2074. *melastroma*, Fr. ... 2819    2087. *megalospora*, Awd. 2838  
 2075. *apatoria*, C. & E. ... 2822    2088. *donacina*, Not. ... 2840  
 2076. *Peckii*, Howe, ... 2825    2089. *majuscula*, C. & H., Grev.  
 2077. *phlyctænoides*, Mont. 2827    xiii., 17.  
 2078. *purpurascens*, DC. 2828    2090. *cratægi*, Wint., Grev. xiv.  
 2079. *complexa*, Mont. ... 2829    48  
 2080. *oleifera*, Tul. ... 2830    2091. *Caproni*, Cooke, Grev. xiv.  
 2081. *fulvo-pruinata*, Berk. 2831    48  
 2082. *clethricola*, C. & E. 2833    2092. *bignoniæ*, Schw. ... 4194

\*\* AGLAOSPORA, Not. Sporidia tri-vel pluriseptata.

*a. Geminispora.* Asci bispori.

2093. *titan*, B. & R. ... 3350

*b. Asci tetraspori.*

2094. *profusa*, Not. .. 3346    = *anomia*, Fr.  
       = *seiridia*, B. & C.    2095. *effusa*, Rehm. ... 3347  
       = *macrospora*, B. & Br.    2096. *Malbrancheana*,  
       = *Sartwelli*, B. & C.    Sacc. ... 3348  
       = *ocellata*, Schw.

c. *Asci octospori.*† *Sporidia mutica.*

- |   |  |
|---|--|
| 2097. lanciformis, <i>Fr.</i> ... 3349    | 2102. xanthoxyli, <i>Peck</i> , 3355, 4016.      |
| 2098. umbonata, <i>Tul.</i> ... 3351      |  |
| 2099. stigmoidea, <i>C. &amp; E.</i> 3352 | 2103. sambucina, <i>Peck</i> ... 3356            |
| 2100. longipes, <i>Tul.</i> ... 3353      | 2104. tubulosa, <i>B. &amp; C.</i> , 3699, 3258. |
| 2101. convergens, <i>Tode.</i> 3354       |  |

†† *Sporidia hyalino-appendiculata.*

- |  |                                       |
|--|---------------------------------------|
| 2105. Berkeleyi, <i>Tul.</i> ... 3359        | 2108. macrosperma, <i>Tul.</i> 3362   |
| 2106. aucta, <i>B. &amp; Br.</i> ... 3360    | 2109. Kicksii, <i>West</i> ... 3363   |
| 2107. hapalocystis, <i>B. &amp; Br.</i> 3361 | 2110. bicornis, <i>Cooke</i> ... 3364 |

GEN. 4. **FENESTELLA**, *Tul. Sacc. Syll. II.*, 325.—Stroma corticale, valseum. *Sporidia multiseptata, muriformia vel clathrata.*

\* EU-FENESTELLA. *Sporidia colorata.*

- |   |   |
|---|---|
| 2111. princeps, <i>Tul.</i> ... 3995        | 2124. salicis, <i>Rehm.</i> ... 4008                |
| 2112. tetratrupha, <i>B. &amp; Br.</i> 3996 | 2125. rostrata, <i>Fckl.</i> ... 4009               |
| 2113. minor, <i>Tul.</i> ... 3997           | 2126. Faberi, <i>Kunze.</i> ... 4010                |
| 2114. bipapillata, <i>Tul.</i> ... 3998     | 2127. betulæ, <i>Nees.</i> ... 4011                 |
| 2115. media, <i>Tul.</i> ... 3999           | 2128. superficialis, <i>C. &amp; P.</i> 4012        |
| 2116. phæospora, <i>Sacc.</i> ... 4000      | 2129. vitellina, <i>Mont.</i> ... 4013              |
| 2117. macrospora, <i>Fckl.</i> 4001         | 2130. castanicola, <i>B. &amp; C.</i> 4014          |
| 2118. Mougeotii, <i>Pers.</i> ... 4002      | 2131. frit, <i>Sacc. (vix Fries)</i> 4015           |
| 2119. melastoma, <i>Fr.</i> ... 4003        | 2132. callispora, <i>Duby., Grev.</i> xiv. 48       |
| 2120. vestita, <i>Fr.</i> ... 4004          | 2133. hormospora, <i>B. &amp; C., Grev.</i> xiv. 48 |
| 2121. lycii, <i>Duby.</i> ... 4005          |   |
| 2122. tumida, <i>Pers.</i> ... 4006         |   |
| 2123. condensata, <i>B. &amp; C.</i> 4007   |   |

\*\* OLETHRIDIUM. *Sporidia hyalina.*

- |  |  |
|--|--|
| 2134. Burchelli, <i>Cooke</i> ... 4017 | 2135. schistostroma, <i>Duby.</i> 4504 |
|--|--|

FLORA VENETA CRITTOGAMICA (*Bizzozero*).—The first part of this work, consisting of 570 pages, octavo, contains the Fungi in a very compact form for reference, and clearly printed. The only disadvantage, and that a considerable one for British students, is that the descriptions are all in Italian, otherwise, as it contains measurements under every species, it would be exceedingly useful. It need scarcely be said that the Pyrenomycetes are classed fundamentally on the system propounded by Saccardo. There is a copious index, and the price is fifteen shillings.

## NEW BRITISH FRESH-WATER ALGÆ.

**Vaucheria sphaerospora.** Nordst. Bot. Not., 1878, p. 177, t. 2.

Loosely cæspitose, antheridia at the apex of longer or rarely of the shorter branches, slightly tumid, very often a little incurved, acuminate, furnished about the apex with two (rarely four) nearly opposite divergent conical processes, connected with the side or the base (at first with the apex) of the oogonium, by means of a short cell destitute of chlorophyll. Oogonium globose, or obovate-globose, oospore globose, chlorophyllose, membrane not thick, not entirely filling the oogonium.

SIZE.—Threads, .026-.06 mm. diam. Oogonia, .104-.136 mm. diam. Oospore, .088-.120 mm. diam.

On the mud at low water of the Thames at Kew. Commonly marine.

Found by Professor O. Nordstedt. August, 1885.

**Palmodactylon subramosum.** Nag.

This form, which we regard as a condition of *Hydrurus penicellatus*, has been found in Yorkshire by Mr. T. Hebden, of Keighley, as recorded in the Journal of the Quekett Microscopical Club.

Pomologists and Mycologists will alike be grieved to read the following sad announcement :—

HENRY GRAVES BULL, M.D.

(Of Hereford),

DIED ON SATURDAY EVENING, OCT. 31, 1885,

AFTER A BRIEF ILLNESS,

Aged 67 years.

The great work which he laboured to perfect, "The Herefordshire Pomona," was just completed, and the smaller "Handbook" of the Apples and Pears of Herefordshire commenced, when he was suddenly struck down by a fearful and insidious disease. Those who have met him year by year at the Fungus Forays of the Woolhope Club, will ever remember his smiling face, his kindly and amiable disposition, and his indomitable energy. All that large number of survivors who had the privilege of his friendship will unite in the testimony that—

"We shall not look upon his like again."

## BRAITHWAITE'S BRITISH MOSS FLORA.

We are happy to announce the appearance of the ninth part of this excellent work, and, in common with the majority of subscribers, can only hope that succeeding parts will be accelerated as much as possible. Having every sympathy with a business man who finds his leisure far too little for such a project, we nevertheless cannot conceal our anxiety for the more rapid progress of the work. The present part continues the *Tortulaceæ*, with four plates; the total number of which are now 36, and the letter-press reaches to page 244. The acknowledged merit of this Flora disarms criticism, and it is, in fact, just because it is so good, and so much wanted, that we cannot help regretting its slow progress. The next part is announced to contain eight plates, which will complete the first volume, "including one-half of our Acrocarpous Mosses." It would greatly increase the confidence of subscribers if the announcement could be made that this volume will reach its completion within the current year.

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FUNGI MORICOLÆ (*A. N. Berlese*).—Part 2 is fully as meritorious in execution as the first part, and contains 10 plates, of which seven belong to the Pyrenomycetes. We can add nothing to our previous estimate.

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## BRITISH SPHÆROPSIDEÆ.

## PROVISIONAL LIST OF SPECIES HITHERTO FOUND IN THE BRITISH ISLANDS.

BY M. C. COOKE.

(Continued from p. 36.)

199. *Diplodia amorphæ*, Wallr. Sacc. Syll. 1872.  
On *Amorpha fruticosa*. Kew.
200. *Diplodia Scheidweileri* (West) Sacc. Syll., 1830.  
On *Tilia*. Near Bristol (C.B.)
201. *Diplodia rosarum*, West. Sacc. Syll. 1877.  
On roses.
202. *Diplodia kerriæ*, Berk. Sacc. Syll. 1878.  
On *Kerria japonica*.
203. *Diplodia cistina*, Cke. Grev. XIV., 4.  
On *Cistus laurifolius*. Kew.
204. *Diplodia rubi*, Fr. Sacc. Syll. 1879.  
On bramble. Kent; King's Cliffe; Barnet.
205. *Diplodia Roumegueri*, Sacc. Syll. 1884.  
On *Prunus lauro-cerasus*. Kew.
206. *Diplodia cratægi*, West. Sacc. Syll. 1887.  
On *Cratægus*. Kent.
207. *Diplodia hederæ*, Fckl. Sacc. Syll. 1913.  
On twigs and leaves of ivy.
208. *Diplodia mamillana*, Fr. Sacc. Syll. 1914.  
On *Cornus*. Mickleham.
209. *Diplodia paupercula*, B. & Br. Sacc. Syll. 1916.  
On *Platanus*. Batheaston.
210. *Diplodia loniceræ*, Fckl. Sacc. Syll. 1919.  
On honeysuckle. Kew.
211. *Diplodia sambucina*, Sacc. Syll. 1921.  
On *Sambucus nigra*. Kew.
212. *Diplodia lantana*, Fckl. Sacc. Syll. 1923.  
On *Viburnum lantana*. Darenth (F. B. II., 620); Kew.
213. *Diplodia paulowniæ*, Cke. Grev. XIII., 96.  
On *Paulownia imperialis*. Kew.
214. *Diplodia lilacis*, West. Sacc. Syll. 1928.  
On *Syringa vulgaris*. Shrewsbury (F. B. II., 626); King's Lynn.
215. *Diplodia ligustri*, West. Sacc. Syll. 1929.  
On *Ligustrum vulgare*. Darenth (F. B. II., 621); Forden; Kew; Highgate.
216. *Diplodia laurina*, Sacc. Syll. 1937.  
On *Laurus nobilis*. Kew.

217. *Diplodia elæagni*, Pass. Sacc. Syll. 1941.  
On *Elæagnus angustifolius*. Kew.
218. *Diplodia celtidis*, Roum. Sacc. Syll. 1944.  
On *Celtis occidentalis*. Kew.
219. *Diplodia melæna*, Lev. Sacc. Syll. 1946.  
On elm branches.
220. *Diplodia sycina*, Mont. Sacc. Syll. 1948.  
On *Ficus carica*. King's Cliffe.
221. *Diplodia mori*, West. Sacc. Syll. 1956.  
On *Morus alba*. Kew.
222. *Diplodia juglandis*, Fr. Sacc. Syll. 1962.  
On *Juglans regia*.
223. *Diplodia populina*, Fckl. Sacc. Syll. 1964.  
On *Populus nigra*.
224. *Diplodia mutila*, Fr. Sacc. Syll. 1965.  
On *Populus*. Kent ; Shrewsbury.
225. *Diplodia coryli*, Fckl. Sacc. Syll. 1967.  
On *Corylus avellana*.
226. *Diplodia faginea*, Fr. Sacc. Syll. 1969.  
On *Fagus sylvatica*.
227. *Diplodia salicina*, Lev. Ann. Sci. Nat. 1846, 292.  
On *Salix*. Forden (F. B. II., 622).
228. *Diplodia juniperi*, West. Sacc. Syll. 1979.  
On Juniper. Stratford-on-Avon.
229. *Diplodia sapinea*, Fr. Sacc. Syll. 1984.  
On *Pinus*. Terrington (F. B. II., 17).
230. *Diplodia microsporella*, Sacc. Syll. 1986.  
On *Ligustrum*. Kew.

\*\* On leaves and fruits.

231. *Diplodia taxi*, Sow. Sacc. Syll. 1996.  
On yew leaves.
232. *Diplodia conigena*, Desm. Sacc. Syll. 1998.  
On cones of *Pinus sylvestris*. Minstead (New Forest).
233. *Diplodia ilicis*, Fr. Sacc. Syll. 2002.  
On holly leaves.
234. *Diplodia hedericola*, Sacc. Syll. 2004.  
On ivy leaves.
235. *Diplodia inconspicua*, Cooke. Grev. XIII., 96.  
On box leaves. Kew.
236. *Diplodia consors*, B. & Br. Sacc. Syll. 2019.  
On leaves of cherry laurel. Forden.
237. *Diplodia tecta*, B. & Br. Sacc. Syll. 2020.  
On leaves of cherry laurel.
238. *Diplodia malorum*, Fr. Sacc. Syll. 2021.  
On apples. King's Cliffe.

239. **Diplodia magnoliæ**, West. Sacc. Syll. 2024.  
On twigs and leaves of *Magnolia grandiflora*. Kew.
240. **Diplodia arbuticola**, Fr. Sacc. Syll. 2028.  
On *Arctostaphylos uva ursi*. Scotland.

B. On herbaceous Dicotyledons.

241. **Diplodia sarmentorum**, Fr. Sacc. Syll. 2035.  
On *Menispermum canadense*. Kew.
242. **Diplodia humuli**, Fekl. Sacc. Syll. 2036.  
On *Humulus lupulus*.
243. **Diplodia dulcamaræ**, Fekl. Sacc. Syll. 2044.  
On *Solanum dulcamara*.
244. **Diplodia obsoleta**, Karst. Sacc. Syll. 2045.  
On potato haulms. Aberdeen.
245. **Diplodia vulgaris**, Lev. Sacc. Syll. 2065.  
On herb stems.
246. **Diplodia herbarum**, Lev. Sacc. Syll. 2066.  
On *Lappa*, &c. Darenth (F. B. I., 339).
247. **Diplodia smyrnii**, Curr. in Herb.  
On *Smyrnium*. Lewes.

C. On Monocotyledons.

249. **Diplodia coryphæ**, Cooke. Græv. XIII., 96.  
On petioles of palms.

GEN. 4. **MACRODIPLODIA**, Sacc. Syll. III., 374.

Perithecia covered, corticolous, large (resembling *Massaria*), pierced. Sporules oblong, uniseptate, sooty brown, surrounded by a hyaline mucous stratum.

248. **Macrodiplodia Curreyi**, Sacc. Syll. 2089.  
On lime branches. Blackheath.
250. **Macrodiplodia ulmi**, Sacc. Syll. 2090.  
On elm branches. Kidbrooke; Jedbrooke.

GEN. 5. **DIPLODIELLA**, Karst. Sacc. Syll. III., 375.

Perithecia superficial, usually growing on wood, globose, papillate, black, smooth, subcarbonaceous. Sporules elliptical or oblong, uniseptate, coloured.

251. **Diplodiella fibricola**, Berk. Sacc. Syll. 2097.  
On poplar wood. King's Cliffe.
252. **Diplodiella oospora**, Berk. Sacc. Syll. 2098.  
On willow wood. King's Cliffe.
253. **Diplodiella quercella**, Sacc. Syll. 2099.  
On oak wood. Shere.
254. **Diplodiella Cowdelli**, B. & Br. Sacc. Syll. 2105.  
On cotton cloth.

GEN. 6. **BOTRYDIPLODIA**, Sacc. Syll. III., 377.

Perithecia cæspitose, crowded together in a botryoid manner, erumpent, seated upon a definite stroma, between membranaceous and carbonaceous, often papillate. Sporules as in *Diplodia*.

255. **Botrydipodia confuens**, B. & Br. Sacc. Syll. 2108.

On *Daphne laureola*. Milton.

256. **Botrydipodia fraxini**, Fr. Sacc. Syll. 2110.

On *Fraxinus excelsior*. Shrewsbury.

257. **Botrydipodia sphaeroides**, Fr. Sacc. Syll. 2120.

On *Fraxinus*. Shere.

258. **Botrydipodia pyrenophora**, Fr. Sacc. Syll. 2121.

On pear and apple. King's Cliffe; Audley End.

GEN. 7. **DIPLODINA**, West. Sacc. Syll. III., 411.

Perithecia subcutaneous or erumpent, globose, papillate, black, smooth. Sporules ellipsoid-oblong, uniseptate, hyaline.

259. **Diplodina salicis**, West. Sacc. Syll. 2267.

On *Salix babylonica*. Kew.

260. **Diplodina deformis**, Karst. Sacc. Syll. 2277.

On *Sambucus*. Kew.

261. **Diplodina dracenicola**, Sacc. Syll. 2279.

On *Dracæna* leaves.

262. **Diplodina ammophilæ**, Trail. Grev. XIII., 96.

On *Ammophila*. Aberdeen.

Sub-Fam. V. **HENDERSONIÆ**.

Perithecia as in *Diplodiæ*; sporules two or multiseptate, coloured or hyaline.

GEN. 1. **HENDERSONIA**, Berk. Sacc. Syll. III., 418.

Perithecia subcutaneous, erumpent, or almost superficial, globose, papillate or depressed, membranaceous or subcarbonaceous, black. Sporules oblong or fusoid, 2 or many septate, olivaceous or sooty brown.

## I. EU-HENDERSONIA. Sporules of medium size, or small.

\* *Ramicolæ*.263. **Hendersonia vagans**, Fekl. Sacc. Syll. 2290.

On *Fraxinus*. Kew.

264. **Hendersonia sarmentorum**, West. Sacc. Syll. 2293.

On *Vitis*. King's Lynn (F. B. I., 623; II., 23).

265. **Hendersonia coronillæ**, Cooke.

On *Coronilla emerus*, and *Baccharis halamifolia*. Kew Gardens.

266. **Hendersonia mammillana**, Curr. Sacc. Syll. 2296.

On *Rhamnus*.

267. **Hendersonia rhamnicola**, Cooke. Sacc. Syll. 2297.

On *Rhamnus frangula*.

268. **Hendersonia Fiedleri**, West. Sacc. Syll. 2299.  
On *Cornus*. Highgate.
269. **Hendersonia lonicæræ**, Fr. Sacc. Syll. 2309.  
On *Lonicera*. Kew.
270. **Hendersonia rubi**, West. Sacc. Syll. 2316.  
On *Rubus*.  
On *Rosa canina*. Kew.
271. **Hendersonia tilia**, Lev. Sacc. Syll. 2318.  
On *Tilia europæa*. Kew.
272. **Hendersonia ambiens**, Cooke. Grev. XIV., 5.  
On *Acer dasycarpum*. Kew.
273. **Hendersonia tamaricis**, Cooke. Grev. XIV., 5.  
On *Tamarix gallica*. Kew.
274. **Hendersonia exigua**, Cooke. Sacc. Syll. 2330.  
On bark. Edinburgh (F. B. II., 24).

\*\* *Herbicolæ*.

275. **Hendersonia lirella**, Cooke. Sacc. Syll. 2361.  
On *Spiræa ulmaria*.

\*\*\* On *Monocotyledons*.

276. **Hendersonia sparganii**, Nieu. Sacc. Syll. 2377.  
On *Sparganium*. Aberdeen.
277. **Hendersonia culmicola**, Sacc. Syll. 2391.  
On culms of grass. Warwickshire.
278. **Hendersonia culmiseda**, Sacc. Syll. 2392.  
On *Phragmites*. Aberdeen.
279. **Hendersonia equiseti**, Trail. Grev. XIII., 96.  
On *Equisetum*. Aberdeen.

II. SPOROCADUS. Perithecia and sporules large.

280. **Hendersonia loricata**, S. & R. Sacc. Syll. 2410.  
On decorticated branches. Bristol.
281. **Hendersonia ulmicola**, Cke. Sacc. Syll. 2412.  
On *Ulmus*.
282. **Hendersonia polycystis**, B. & Br. Sacc. Syll. 2414.  
On *Betula*.

GEN. 2. **PROSTHEMIUM**, Kunze. Sacc. Syll. III., 444.

Perithecia covered, carbonaceous, globose-depressed, black. Sporules multiseptate, united in a stellate capitulum, coloured; basidia obsolete or filiform.

283. **Prosthemium betulinum**, Kunze. Sacc. Syll. 2430.  
On *Betula alba*. Blackheath. Wiltshire.
284. **Prosthemium stellare**, Riess. Sacc. Syll. 2431.  
On *Alnus glutinosa*. Spye Park.

GEN. 3. **STAGONOSPORÆ**, *Sacc. Syll.* III., 445.

Perithecia innate or erumpent, globose, often papillate and pierced, black, membranaceous or subcarbonaceous. Sporules ellipsoid or elongated, 2 to many-septate, hyaline.

\* On *Dicotyledons*.

285. *Stagonospora turgida*, B. & Br. *Sacc. Syll.* 2439.  
On *Frazinus*. Twycross.
286. *Stagonospora arcus*, B. & Br. *Sacc. Syll.* 2452.  
On *Buxus*. Batheaston.
287. *Stagonospora princeps* (B. & Br.). *Sacc. Syll.* 3171.  
On *Fagus*. Batheaston.
288. *Stagonospora unica*, Cooke. *Sacc. Syll.* 2454.  
On wood.
289. *Stagonospora strobilina*, Curr. *Sacc. Syll.* 2457.  
On cones of *Pinus maritima*.
290. *Stagonospora pini*, Grove. *Journ. Bot.*, 1885.  
On leaves of *Pinus sylvestris*.

\*\* On *Monocotyledons*.

291. *Stagonospora typhoidearum*, Desm. *Sacc. Syll.* 2465.  
On *Typha* and *Sparganium*. Wiltshire.
292. *Stagonospora trimera*, Cooke. *Sacc. Syll.* 2469.  
On *Juncus maritima*.
293. *Stagonospora caricis* (Oud.). *Sacc. Syll.* 2471.  
On *Carices*. Aberdeen.
294. *Stagonospora macropus*, B & Br. *Sacc. Syll.* 2474.  
On *Carex*.
295. *Stagonospora paludosa*, *Sacc. Syll.* 2475.  
On *Carex*. Aberdeen.
296. *Stagonospora elæocharidis*, Trail. *Grev. XIII.*, 97.  
On *Elæocharis palustris*. Aberdeen.
297. *Stagonospora subseriata*, Desm. *Sacc. Syll.* 2478.  
On grasses. Wiltshire.
298. *Stagonospora elegans*, Berk. *Cooke, Handbook*, 1275.  
On reeds and grasses. Irstead; Lyndhurst; Northamptonshire.
299. *Stagonospora epicalamia*, Cooke. *Sacc. Syll.* 2487.  
On reeds. N. Wootton.

GEN. 4. **CAMAROSPORIUM**, *Schulz. Sacc. Syll.* III., 459.

Perithecia subcutaneous, erumpent, globose, black, often papillate, membranaceous or subcoriaceous. Sporules ovoid, oblong or fusoid, 2 to many septate, muriform, coloured.

\* On *Dicotyledons*.

*Ramicolæ*.

300. *Camarosporium robinia*, West. *Sacc. Syll.* 2491.  
On *Robinia*. Swanscombe (F. B. I., 625).

301. *Camarosporium berberidis*, Cooke. *Grev.* XIII., 97.  
On *Berberis vulgaris*. Kew.
302. *Camarosporium limoniæ*, Cooke. *Grev.* XIII., 97.  
On *Citrus trifoliata*. Kew.
303. *Camarosporium macrosporum*, B. & Br. *Sacc. Syll.* 2501.  
On *Philadelphus*.
304. *Camarosporium spireæ*, Cooke. *Grev.* XIII., 97.  
On *Spiræa callosa* and *S. opulifolia*. Kew.
305. *Camarosporium cistinum*, Cooke. *Grev.* XIV., 5.  
On *Cistus laurifolius*. Kew.
306. *Camarosporium staphyleæ*, Cooke. *Grev.* XIV., 5.  
On *Staphylea pinnata* and *S. trifoliata*. Kew.  
On *Celtis occidentalis*. Kew.
307. *Camarosporium quercus*, *Sacc. Syll.* 2515.  
On *Quercus coccinea*. Kew.
308. *Camarosporium mori*, *Sacc. Syll.* 2516.  
On *Morus alba*. Kew.

*Follicolæ.*

309. *Camarosporium oreades*, D. R. & M. *Sacc. Syll.* 2526.  
On oak leaves.  
\*\* On *Monocotyledons* and *Acotyledons*.
310. *Camarosporium Stephensii*, B. & Br. *Sacc. Syll.* 2542.  
On *Pteris aquilina*. Leigh Wood.

GEN. 5. **DICHOMERA**, Cooke. *Sacc. Syll.* III., 472.

Perithecia immersed in a pulvinate erumpent Dothideaform stroma. Sporules globose or ellipsoid, 2-4 septate, muriform, or radiately or cruciately 3-6 septate, coloured.

311. *Dichomera Saubinetii* (Mont.). *Sacc. Syll.* 2547.  
On *Rhamnus frangula*. Highgate (F. B. II., 619).
312. *Dichomera salicina*, Vize. *Sacc. Syll.* 2549.  
On *Salix*. Forden.
313. *Dichomera mutabilis*, B. & Br. *Sacc. Syll.* 2550.  
On *Platanus*.

*Sub-Fam. VI. CYTISPOROIDEÆ.*

Stroma mostly verrucæform, many-celled within, perithecia formed from the stroma. Sporules unicellular, hyaline.

GEN. 1. **RABENHORSTIA**, Fr. *Sacc. Syll.* III., 243.

Stroma erumpent, globose, truncate, cellular within, coriaceous-carbonaceous, the upper portion often falling away with the bark. Sporules ovoid-oblong, continuous, hyaline.

314. *Rabenhorstia lilis*, Fr. *Sacc. Syll.* 1427.  
On lime branches.
315. *Rabenhorstia rudis*, Fr. *Sacc. Syll.* 1429  
On laburnum. Regent's Park.



GEN. 2. **PLACOSPHERIA**, *Sacc. Syll.* III., 244.

Stroma effused, black, often covered by the epidermis, distinctly or obsoletely cellular within. Sporules oblong, fusoid, or cylindrical, hyaline.

316. **Placosphæria onobrychidis** (*DC.*). *Sacc. Syll.* 1439.

On *Lathyrus*. Kew.

317. **Placosphæria corrugata**, *Karst. Sacc. Syll.* 1445.

On hard wood.

GEN. 3. **FUSICOCUM**, *Corda. Sacc. Syll.* III., 247.

Stroma subcutaneous, erumpent, convex or conical, subcoriaceous, black, more or less distinctly cellular within. Sporules fusoid, continuous, hyaline, usually straight.

318. **Fusicoccum fibrosum**, *Sacc. Syll.* 1447.

On *Rhamnus cathartica*.

319. **Fusicoccum hapalocystis**, *Sacc. Syll.* 1455.

On *Platanus*.

GEN. 4. **CYTISPORA**, *Fr. Sacc. Syll.* III., 252.

Stroma covered or erumpent, conical or verruciform, cellular within, cells often distinctly circinating. Sporules numerous, continuous, hyaline, oblong, sausage-shaped, expelled when moist in tendrils.

\* *Ramicolous*.

320. **Cytispora Hendersonii**, *B. & Br. Sacc. Syll.* 1476.

On *Rosa arvensis*.

321. **Cytispora rhodophila**, *Sacc. Syll.* 1477.

On *Rosa canina*.

322. **Cytispora rosarum**, *Grev. Sacc. Syll.* 1478.

On *Rosa canina*.

323. **Cytispora microspora**, *Corda. Sacc. Syll.* 1480.

On *Amelanchier*. Kew.

324. **Cytispora rubescens**, *Fr. Sacc. Syll.* 1481.

On *Sorbus aucuparia*, &c. Forden, (*F. B.* II., 623.) King's Cliffe.

325. **Cytispora leucostoma**, *Pers. Sacc. Syll.* 1483.

On *Prunus domestica*, &c.

326. **Cytispora microstoma**, *Sacc. Syll.* 1486.

On *Prunus spinosa*.

327. **Cytispora atra**, *Bon. Sacc. Syll.* 1504.

On *Morus alba*. Kew.

328. **Cytispora occulta**, *Sacc. Syll.* 1509.

On *Alnus glutinosa*. Regent's Park.

329. **Cytispora stellulata**, *Sacc. Syll.* 1516.

On *Ulmus campestris*.

330. **Cytispora carbonacea**, *Fr. Sacc. Syll.* 1517.

On *Celtis occidentalis*. Kew.

331. *Cytispora nivea*, Hoffm. Sacc. Syll. 1518.  
On *Populus nigra*, &c.
332. *Cytispora chrysosperma*, Pers. Sacc. Syll. 1519.  
On *Populus alba*, &c. Highgate (F. B. II., 113); Shrewsbury;  
King's Cliffe; Glasgow.
333. *Cytispora translucens*, Sacc. Syll. 1522.  
On *Salix babylonica*.
334. *Cytispora Schweinitzii*, Sacc. Syll. 1523.  
On *Salix fragilis* and *S. petiolaris*. Kew.
335. *Cytispora salicis*, Rabh. Sacc. Syll. 1526.  
On *Salix vitellina*, *S. alba*, and *S. fragilis*. Kew.
336. *Cytispora caprea*, Fekl. Sacc. Syll. 1530.  
On *Salix caprea*.
337. *Cytispora fugax*, Fr. Sacc. Syll. 1532.  
On *Salix*. Darenth (F. B. II., 115).
338. *Cytispora decipiens*, Sacc. Syll. 1534.  
On *Carpinus*.
339. *Cytispora guttifera*, D.C. Sacc. Syll. 1539.  
On *Corylus* and *Quercus*.
340. *Cytispora intermedia*, Sacc. Syll. 1540.  
On *Quercus*. Kew.
341. *Cytispora platani*, Fekl. Sacc. Syll. 1557.  
On *Platanus*. Kew.
342. *Cytispora leucosperma*, Fr. Sacc. Syll. 1561.  
On various trees. Highgate (F. B. II., 114); Shrewsbury;  
King's Cliffe.
343. *Cytispora Acharii*, Sacc. Syll. 1559.  
On decorticated branches.
344. *Cytispora flavovirens*, Sacc. Syll. 1560.  
On *Acer*, &c. Kew.
345. *Cytispora ceratophora*, Sacc. Syll. 1562.  
On *Quercus*, *Ulmus*, &c. Whitehall; Kew.
346. *Cytispora ambiens*, Sacc. Syll. 1563.  
On *Fraxinus*, *Betula*, *Negundo*, &c. Kew.
347. *Cytispora Curreyi*, Sacc. Syll. 1566.  
On *Abies*, *Larix*, &c.
348. *Cytispora abietis*, Sacc. Syll. 1567.  
On *Abies excelsa*.
349. *Cytispora Kunzei*, Sacc. Syll. 1569.  
On *Abies pectinata* and *A. excelsa*.
350. *Cytispora pini*, Desm. Sacc. Syll. 1571.  
On *Pinus sylvestris*. Twycross.
351. *Cytispora carphosperma*, Fr. Sacc. Syll. 1504.  
On *Tilia*. Blackheath.
352. *Cytispora hippophaes*, Thum. Sacc. Syll. 1597.  
On *Hippophae rhamnoides*. Kew.

353. *Cytispora euonymi*, Cke. *Grev.* XIV., 4.  
On *Euonymus americanus*. Kew.
354. *Cytispora staphylem*, Cooke. *Grev.* XIV., 4.  
On *Staphylea pinnata* and *S. trifoliata*. Kew.
355. *Cytispora jasmini*, Cooke. *Grev.* XIV., 4.  
On *Jasminum officinale*. Kew.

\*\* *Foliicolous*.

356. *Cytispora pinastri*, Fr. *Sacc. Syll.* 1599.  
On leaves of *Pinus sylvestris*, &c.
357. *Cytispora foliicola*, Lib. *Sacc. Syll.* 1602.  
On leaves of *Vinca*. Aberdeen; Swanscombe.
358. *Cytispora lauro-cerasi*, Fekl. *Sacc. Syll.* 1603.  
var. *ramulorum*, *Sacc.*  
On twigs of cherry laurel. Kew.
359. *Cytispora palmarum*, Cooke. *Grev.* XIV.  
On palm petioles. Kew.

GEN. 5. **CEUTHOSPORA**, *Grev. Sacc. Syll.* III., 277.

Stroma innato-erumpent, conical-truncate, subcoriaceous, cellular within (rarely 1-celled); ostiola often confluent in the centre. Sporules oblong-cylindrical, usually straight, hyaline, oozing out in tendrils.

360. *Ceuthospora phacidioides*, *Grev. Sacc. Syll.* 1618.  
On holly leaves. Highgate (F. B. I., 158); Shrewsbury; Edinburgh; Bungay; Neatishead.
361. *Ceuthospora lauri*, *Grev. Sacc. Syll.* 1628.  
On *Laurus nobilis*. Appin; Audley End; Forden; Northamptonshire.

GEN. 6. **ERIOSPORA**, *B. & Br. Sacc. Syll.* III., 600.

Stroma depressed, multicellular within, cells subglobose. Sporules fasciculate, in fours or sixes, filiform, continuous, hyaline, seated on a short common sporophore, at length ejected from a common orifice.

362. *Eriospora leucostoma*, *B. & Br. Sacc. Syll.* 3260.  
On dead leaves of *Typha* and *Carex*.

GEN. 7. **CYTISPORINA**, *Sacc. Syll.* III., 601.

Stroma valsioid, verruciform, or effused, on bark or wood; perithecia subimmersed, ostiola various, often emergent. Sporules filiform, curved, hyaline, continuous.

363. *Cytisporina stellulata*, *Sacc. Syll.* 3268.  
On branches of *Ulmus*.

GEN. 8. **MICROPERA**, *Lev. Sacc. Syll.* III., 604.

Perithecia erumpenti-superficial, often densely cæspitose, suberous, or coriaceous, sometimes furfuraceous, globosely conic or somewhat elongated, ostiola spurious. Sporules fusoid-filiform, flexuous or curved, multiguttulate, hyaline, on short pedicels.

364. *Micropera drupacearum*, Lev. Sacc. Syll. 3281.

On bark of *Prunus* and *Cerasus*. Forden (F. B. II., 618).

Sub-Fam. 7. *PHYLLOSTICTÆÆ*.\*

Epiphyllous, or chiefly so. Perithecia membranaceous, gregarious (often on definite spots), naked, opening by a pore. Sporules hyaline, continuous or septate.

GEN. 1. *PHYLLOSTICTA*, Pers. Sacc. Syll. III., 3.

Perithecia membranaceous, lenticular, covered by the cuticle, pierced with a punctiform pore. Sporules ovoid or oblong, continuous, hyaline, basidia very short or none.

\* On Arborescent Dicotyledons.

365. *Phyllosticta pavie*, Desm. Sacc. Syll. 2.

On *Pavia macrostachya*. Kew.

366. *Phyllosticta sanguinea*, Desm. Sacc. Syll. 14.

On *Cotoneaster frigida*. Kew.

367. *Phyllosticta ruborum*, Sacc. Syll. 30.

On *Rubus*. Forden; Lyndhurst.

368. *Phyllosticta rosæ*, Desm. Sacc. Syll. 31.

On rose leaves. Neatishead.

369. *Phyllosticta cytisi*, West. Sacc. Syll. 40.

On laburnum. Highgate; Shere.

370. *Phyllosticta aceris*, Sacc. Syll. 61.

On *Acer campestre*. Darent.

371. *Phyllosticta rhamni*, West. Sacc. Syll. 62.

On *Rhamnus frangula*. Lyndhurst.

372. *Phyllosticta euonymi*, Sacc. Syll. 68.

On *Euonymus europæus*. Kew.

373. *Phyllosticta tineæ*, Sacc. Syll. 75.

On *Viburnum tinus*. Kew.

374. *Phyllosticta ribicola*, Fr. Sacc. Syll. 82.

On *Ribes rubrum*.

375. *Phyllosticta lauri*, West. Sacc. Syll. 84.

On *Laurus nobilis*. Swanscombe; Highgate.

376. *Phyllosticta vulgaris*, Desm. Sacc. Syll. 90.

On honeysuckle. Ashmanhaugh; Shrewsbury; Twycross; Chingford.

377. *Phyllosticta ionicæræ*, West. Sacc. Syll. 90.

On honeysuckle. Darent; Tay, N.B.

378. *Phyllosticta sambuci*, Desm. Sacc. Syll. 95.

On *Sambucus*. Shere; Whitehall.

379. *Phyllosticta hedericola*, D.R. & M. Sacc. Syll. 100.

On ivy leaves. Highgate; Shrewsbury; Lyndhurst.

\* This sub-family would have been better placed first, preceding *Phomoidææ*.

380. **Phyllosticta cornicola**, D.C. Sacc. Syll. 103.  
On *Cornus*. King's Cliffe; Darenth; Chichester; Audley End.
381. **Phyllosticta fraxinicola**, Curr. Sacc. Syll. 106.  
On *Fraxinus*. Herb. Currey.
382. **Phyllosticta ligustri**, Sacc. Syll. 107.  
On privet leaves. Highgate; Shere; Kew.
383. **Phyllosticta syringæ**, West. Sacc. Syll. 109.  
On *Syringa vulgaris*. Kew.
384. **Phyllosticta phillyrææ**, Sacc. Syll. 113.  
On *Phillyrea*. Kew.
385. **Phyllosticta rhododendri**, West. Sacc. Syll. 116.  
On rhododendron. Kew.
386. **Phyllosticta arbuti**, Desm. Sacc. Syll. 118.  
On *Arbutus unedo*. Highgate; Swanscombe; Kew.
387. **Phyllosticta garryæ**, C. & H. Sacc. Syll. 121.  
On *Garrya elliptica*. Kew.
388. **Phyllosticta limbalis**, Pers. Sacc. Syll. 124.  
On box leaves. Forden; Shere.
389. **Phyllosticta Bolleana** (Thum.). Sacc. Syll. 620.  
On *Hoya carnosæ*. Neatishead.
390. **Phyllosticta ilicicola**, Fr. in Mong. & Nest. Ess. 975.  
On holly leaves. Kew.
391. **Phyllosticta magnoliæ**, var. **Cookei**, Sacc. Syll. 130.  
On *Magnolia grandiflora*. Kew.
392. **Phyllosticta mahoniæ**, Sacc. & Sp. Sacc. Syll. 131.  
On *Mahonia aquifolia*. Swanscombe; Kew; Shere.
393. **Phyllosticta berberidis**, West. Sacc. Syll. 134.  
On *Berberis vulgaris*. Darenth.
394. **Phyllosticta asiatica**, Cooke. Grev. XIII., 91.  
On *Berberis asiatica*. Kew.
395. **Phyllosticta paulowniæ**, Sacc. Syll. 139.  
On *Paulownia imperialis*. Kew.
396. **Phyllosticta tilii**, Sacc. & Sp. Sacc. Syll. 141.  
On *Tilia europæa*. Lyndhurst.
397. **Phyllosticta sidæicola**, Cooke. Grev. XIV., 39.  
On *Sida mepæa*. Kew.
398. **Phyllosticta betulina**, Sacc. Syll. 170.  
On *Betula alba*. Wimbledon; Kew; Rednal; Fen End.
399. **Phyllosticta populina**, Sacc. Syll. 176.  
On *Populus nigra*. Holloway.
400. **Phyllosticta maculæformis**, Sacc. Syll. 189.  
On *Castanea vesca*. Darenth.

\*\* On Herbaceous Dicotyledons.

401. **Phyllosticta ranunculorum**, Sacc. Syll. 197.  
On *Ranunculus repens*. Abridge.
402. **Phyllosticta calthæcola**, D.C. Sacc. Syll. 348.  
On *Caltha palustris*. Colney Hatch.

403. *Phyllosticta helleborella*, Sacc. Syll. 201.  
var. *nigra*, Cooke.  
On *Helleborus niger*. Kew.
404. *Phyllosticta violæ*, Desm. Sacc. Syll. 203.  
On *Viola odorata*. Hampstead.
405. *Phyllosticta helianthemii*, Roum. Sacc. Syll. 204.  
On *Helianthemum vulgare*. Lyndhurst.
406. *Phyllosticta brassicæ*, Curr. Sacc. Syll. 207.  
On *Brassica*. Kew.
407. *Phyllosticta erysimi*, West. Sacc. Syll. 208.  
On *Erysimum alliaria*. Shere.
408. *Phyllosticta epimedii*, Sacc. Syll. 211.  
On *Epimedium alpinum*. Kew.
409. *Phyllosticta impatientis*, Kirch. Sacc. Syll. 346.  
On *Impatiens parviflora*. Kew.
410. *Phyllosticta destructiva*, Desm. Sacc. Syll. 214.  
On *Malva sylvestris*. Dartford; Kew; Lyndhurst.
411. *Phyllosticta tormentillæ*, Sacc. Syll. 216.  
On *Tormentilla erecta*. Lyndhurst.
412. *Phyllosticta argentinæ*, Desm. Sacc. Syll. 218.  
On *Potentilla anserina*. Twycross.
413. *Phyllosticta fragaricola*, Desm. Sacc. Syll. 219.  
On strawberry leaves. Forden; Highgate.
414. *Phyllosticta filipendulina*, v. *ulmarie*, Sacc. Syll. 222.  
On *Spiræa ulmaria*. Lyndhurst.
415. *Phyllosticta medicaginis*, Fekl. Sacc. Syll. 228.  
On *Medicago sativa*. Dartford.
416. *Phyllosticta vicie*, Lib. Sacc. Syll. 232.  
On *Vicia sepium*. Sydenham.
417. *Phyllosticta dianthi*, West. Sacc. Syll. 237.  
On *Dianthus barbatus*. In gardens.
418. *Phyllosticta cirsii*, Desm. Sacc. Syll. 238.  
On *Cirsium lanceolatum*. Bungay.
419. *Phyllosticta lappæ*, Sacc. Syll. 242.  
On *Lappa*. Almond park, Salop.
420. *Phyllosticta angelicæ*, Sacc. Syll. 252.  
On *Angelica sylvestris*. Highgate.
421. *Phyllosticta scrophulariæ*, West. Sacc. Syll. 253.  
On *Scrophularia*. Dinmore.
422. *Phyllosticta digitalis*, Belly. Sacc. Syll. 256.  
On *Digitalis*. Shere; Lyndhurst.
423. *Phyllosticta dulcamaræ*, Sacc. Syll. 268.  
On *Solanum dulcamara*. Kew.
424. *Phyllosticta glechomæ*, Sacc. Syll. 270.  
On *Glechoma hederacea*. Lyndhurst; Kew.
425. *Phyllosticta ajugæ*, Sacc. & Sp. Sacc. Syll. 276.  
On *Ajuga reptans*. Lyndhurst.

426. *Phyllosticta plantaginis*, Sacc. Syll. 290.  
On *Plantago major*. Kew ; Shere ; Swanscombe.
427. *Phyllosticta mercurialis*, Desm. Sacc. Syll. 291.  
On *Mercurialis*. Darenth.
428. *Phyllosticta humuli*, Sacc. & Sp. Sacc. Syll. 293.  
On *Humulus lupulus*. Swanscombe.
429. *Phyllosticta aizoon*, Cooke. Grev. XIV., 39.  
On *Sedum aizoon*. Kew.
430. *Phyllosticta atriplicis*, Desm. Sacc. Syll. 299.  
On *Atriplex*.
431. *Phyllosticta polygonorum*, Sacc. Syll. 300.  
On *Polygonum persicaria*. Irstead.
432. *Phyllosticta podophylli*, Curt. Sacc. Syll. 305.  
On *Podophyllum peltatum*. Kew.
433. *Phyllosticta primulicola*, Desm. Sacc. Syll. 308.  
On *Primula*. Shrewsbury ; Forden ; Highgate ; Mickleham ;  
Shere ; Ascot ; Darenth ; Irstead.
434. *Phyllosticta lutetiana*, Sacc. Syll. 309.  
On *Circæa lutetiana*. Kew ; Dinmore.
435. *Phyllosticta hydrophila*, Speg. Sacc. Syll. 310.  
On *Nymphæa alba*. Kew.

\*\* On Monocotyledons and Acotyledons.

436. *Phyllosticta ruscicola*, Desm. Sacc. Syll. 319.  
On *Ruscus aculeatus*. Swanscombe ; Kew.
437. *Phyllosticta cruenta*, Fr. Sacc. Syll. 324.  
On *Convallaria*. Milton, Norths.
438. *Phyllosticta alismatis*, Sacc. & Sp. Sacc. Syll. 332.  
On *Alisma plantago*. Epping Forest.
439. *Phyllosticta sagittariæ*, Rabh. Sacc. Syll. 373.  
On *Sagittaria*. Bungay ; Irstead.
440. *Phyllosticta potamia*, Cooke. Grev., XIV., 39.  
On *Potamogeton*. Lyndhurst ; Epping Forest,

GEN. 2. **ASTEROMA**, D.C. Sacc. Syll. III., 201.

Perithecia minute, seated usually on radiating black fibrils.  
Sporules ovoid-oblong.

A. EU-ASTEROMA. Perithecia and sporules known.

441. *Asteroma padl*, Grev. Sacc. Syll. 1201.  
On leaves of *Prunus padus*. Edinbro' ; Arisaig ; Tay ; Dee ;  
Moray (N.B.).

B. ASTEROMATA DUBIA. Sporules unknown.

\* On woody Dicotyledons.

442. *Asteroma vagans*, Desm. Sacc. Syll. 1217.  
On leaves of various trees.
443. *Asteroma pyri*, Desm. Sacc. Syll. 1219.  
On pear leaves. King's Cliffe.

444. *Asteroma aceris*, Rob. Sacc. Syll. 1234.  
On maple leaves. Darenth.
445. *Asteroma obscurum*, Desm. Sacc. Syll. 1236.  
On leaves of *Cornus*. Dartford.
446. *Asteroma betulæ*, Rob. Sacc. Syll. 1241.  
On leaves of *Betulus*. Wimbledon.
447. *Asteroma salicis*, Rob. Sacc. Syll. 1244.  
On willow leaves. Audley End.
448. *Asteroma ulmi*, Klot. Sacc. Syll. 1248.  
On elm leaves. Darenth; Highgate; North Highlands;  
Sanquhar; Aberdeen.
449. *Asteroma hederæ*, Desm. Ews. No. 774.  
On ivy leaves.

\*\* On herbaceous Dicotyledons.

450. *Asteroma graphoides*, Rob. Sacc. Syll. 1250.  
On leaves of *Stellaria holostea*.
451. *Asteroma prunellæ*, Purt. Sacc. Syll. 1257.  
On *Prunella*. Bagley Wood, Berks; Shotover Hill.
452. *Asteroma Robergei*, Desm. Sacc. Syll. 1258.  
On *Conium*. King's Cliffe.
453. *Asteroma solidaginis*, Cooke. Grev. XIV., 40.  
On *Solidago elliptica*. Kew.

\* On fruits and galls.

454. *Asteroma delicatulum*, Desm. Sacc. Syll. 1277.  
On *Colutea arborescens*. Kew.

\*\* On Monocotyledons.

455. *Asteroma reticulatum*, D.C. Sacc. Syll. 1280.  
On *Convallaria*. King's Cliffe.

C. ACTINONEMA, Fr. Sporidia septate.

456. *Asteroma rosæ*, Lib. Sacc. Syll. 2257.  
On rose leaves. Neatishead; Shrewsbury; Forden; Twycross;  
King's Cliffe; Highgate; Bristol; Ascot; Chingford;  
Lyndhurst; Tay; Moray.
457. *Asteroma crataegi* (?), Berk. Sacc. Syll. 2258.  
On pear leaves. King's Cliffe; Tonbridge.

GEN. 3. **DARLUCA**, Cast. Sacc. Syll. III., 410.

Perithecia superficial, usually parasitic on the sori of Uredines.  
Sporules oblong or fusoid, at length uniseptate, apiculate.

458. *Darlucalium*, Cast. Sacc. Syll. 2263.  
On Uredines. King's Lynn; King's Cliffe; Twycross.

GEN. 4. **ASCOCHYTA**, Lib. Sacc. Syll. III., 384.

Perithecia as in *Phyllosticta*. Sporules uniseptate.

459. *Ascochyta metulisporea*, B. & Br. Sacc. Syll. 2134.  
On ash leaves. Scotland.



460. *Ascochyta rufomaculans*, Berk. Sacc. Syll. 2183.  
On *Vitis vinifera*.
461. *Ascochyta armoracis*, Fekl. Sacc. Syll. 2194.  
On horseradish leaves.
462. *Ascochyta pisi*, Lib. Sacc. Syll. 2197.  
On pods of common pea. King's Cliffe; Glamis.
463. *Ascochyta dianthi*, A. & S. Sacc. Syll. 2203.  
On *Agrostemma* and *Dianthus*. King's Cliffe; London;  
Tansor; Neatished; Appin; Perth.
464. *Ascochyta pallor*, Berk. Sacc. Syll. 2206.  
On bramble shoots. King's Cliffe.
465. *Ascochyta teretiuscula*, Sacc. & Roum. Sacc. Syll. 2243.  
On *Luzula sylvatica*. Aberdeen.

GEN. 4. **SEPTORIA**, Fr. Sacc. Syll. III., 474.

Perithecia commonly seated on discoloured spots, membranaceous. Sporules rod-like, or filiform, many-septate, or many-nucleate, hyaline.

A. On woody Dicotyledons.

466. *Septoria tilis*, West. Sacc. Syll. 2562.  
On lime leaves. Ascot.
467. *Septoria incondita*, Desm. Sacc. Syll. 2576.  
On maple leaves.
468. *Septoria esculi*, Lib. (S. hippocastani, B. & Br.) Sacc. Syll.  
2578, 2579.  
On horse-chestnut leaves. Albury; Audley End; Kew; Dun.
469. *Septoria Badhami*, B. & Br. Sacc. Syll. 2581.  
On vine leaves. Shere; Twycross.
470. *Septoria robinis*, Desm. Sacc. Syll. 2609.  
On *Robinia* leaves.
471. *Septoria cytisi*, Desm. Sacc. Syll. 2611.  
On laburnum leaves. Highgate.
472. *Septoria rosarum*, West. Sacc. Syll. 2617.  
On rose leaves. Forden; Shere; Tay; Dee.
473. *Septoria rubi*, West. Sacc. Syll. 2619.  
On bramble leaves. Forden; Lyndhurst.
474. *Septoria pyricola*, Desm. Sacc. Syll. 2624.  
On apple and pear leaves. Shrewsbury; Shobden; Shere.
475. *Septoria hederis*, Desm. Sacc. Syll. 2644.  
On ivy leaves. Shrewsbury; East Bergholt; Stratford-on-Avon; Tweed; Tay; Dee; Moray; Solway; Clyde; Ross (N.B.).
476. *Septoria insularis*, B. & Br. Sacc. Syll. 2646.  
On ivy leaves.
477. *Septoria ribis*, Desm. Sacc. Syll. 2649.  
On black currant leaves. King's Cliffe; Norfolk; Tay.
478. *Septoria cornicola*, Desm. Sacc. Syll. 2652.  
On *Cornus* leaves. Darenth; Kew.

# Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY  
AND ITS LITERATURE.

## PRÆCURSORES AD MONOGRAPHIA POLYPORORUM.

(Continued from page 21.)

### GEN. III. **POLYSTICTUS.** *Fr. Nova Symb.* 54.

Pileus coriaceus, inodermeus; strato intermedio fibrilloso, abeunte in hymenophorum, in quo pori successive a centro versus ambitum explicati; primitus superficiales, punctiformes, discreti, aperti, dein excavati congesti porosi, et pilei substantia verticaliter oppositi, trama ab hymenophoro formata. *Vegetatio concentrica, zonata.*

**A. Perennes.** Mesopodes vel pleuropodes, stipite anodermeo, contextu sporisque sub-ferrugineis. Stipes sæpe lateralis.

573 *circinatus*, *Fr. Hym. Eur.* 530.

= *dualis*, Peck. 30th Report, N.Y., 44.

574 *tomentosus*, *Fr. Hym. Eur.* 530.

575 *Cumingii*, *Berk. Hook. Journ.* 1842, 147.

576 *Montagnei*, *Fr. Hym. Eur.* 530.

577 *luteo-nitidus*, *Berk. Hook. Journ.* 1856, 175.

578 *flavidus*, *Peck 26th Report N. Y. Mus.* 68.

579 *Kalchbrenneri*, *Fr. Hym. Eur.* 531.

580 *concinus*, *Fr. Epicr.* 436.

581 *perennis*, *Fr. Hym. Eur.* 531.

582 *pictus*, *Schulz. Sturg.* 485.

583 *oblectans*, *Berk. Hook. Journ.* 1845, 51.

= *splendens*, Peck, 26th Report, 68.

584 *bulbipes*, *Fr. Plant Preiss.* 135.

= *cladonia*, *Berk. Hook. Journ.* 1845, 51.

= *perdurans*, *Kalch. Grev.* ix. 1.

585 *fragilissimus*, *Mont. Syll.* 163.

586 *parvulus*, *Klot. Linn.* 1833, 483.

= *connatus*, *Schwz. Amer. Bor.* 330.

= *focicola*, *B. & C. Linn. Journ.* x. 305.

587 *substriatus*, *Rostk. t.* 9.

588 peronatus (*Schulz.*), *Fr. Hym. Eur.* 532.

589 carbonarius, *Fr. Hym. Eur.* 532.

590 salpinctus, *Cooke Grev.* viii. 142.

591 dependens, *B. & C. Grev.* i. 39.

**B. Sacri.** Pileus coriaceus vel papyraceus, aridus, zonatus. Stipes crustaceo-coriocatus.—*Hornotini*, *Fr. Epic.* 436.

592 sacer, *Fr. Epicr.* 436.

593 pulcher, *Fr. Epicr.* 437.

594 renatus, *Berk. Hook. Journ.* 1856, 170.

595 partitus, *Berk. Hook. Journ.* 1856, 170.

596 parmula, *Berk. Hook. Journ.* 1856, 173.

597 marasmoides, *Berk. Hook. Journ.* 1856, 175.

var. setipes, *Berk. Hook. Journ.* 1856, 175.

598 passerinus, *Berk. Hook. Journ.* 1856, 175.

599 perula, *Fr. Epicr.* 437.

600 incomtus, *Fr. Epicr.* 437.

601 quadrans, *B. & Br. Trans. Linn. Soc.* i. 400.

602 xanthopus, *Fr. Epicr.* 473.

= *cupreo-nitens*, *Kalch. Myc. Univ.* 1702.

= *crassipes*, *Curr. Linn. Trans.* 1876, 122.

603 florideus, *Berk. Hook. Journ.* 1852, 137.

**C. Discipodes.** Pileus coriaceus, subreniformis, zonatus, stipite laterali (saepe elongato), vulgo brevissimo, basi scutato-dilatato.

\* DILATATI. *Pileo sicco.*

604 siennæcolor, *Berk. in Herb.*

605 flabelliformis (*Klotsch.*), *Fr. Epicr.* 444.

606 porphyrites, *Berk. Hook. Journ.* 1856, 196.

607 Adami, *Berk. in Cooke Enum. Poly.* 137.

= *dilatatus*, *Berk. Hook. Journ.* 1846.

608 dilatatus *Lev. Ann. Sci. Nat.* 1844, 184.

609 mutabilis, *B. & C. Grev.* i. 38.

610 dealbatus, *Rav. Fungi Car.* iii. 10.

= *Ravenalii*, *B. & C. Grev.* i. 38.

611 xerophyllus, *Berk. Fl. N. Zeal.* ii. 178.

612 luteus, *Nees. Nova Acta. N. C.* xiii., t. 4, f. 2.

613 petaliformis, *B. & C. Linn. Journ.* x, 307.

614 polygrammus, *B. & C. Linn. Journ.* x. 307.

615 vernicipes, *Berk. Linn. Journ.* xvi. 50.

616 carneo-niger, *Berk. Grev.* xii. 15.

617 nephridius, *Berk. Hook. Journ.* 1856, 195.

618 stereoides, *Berk. in Herb.* 2448.

619 affinis (*Nees.*), *Fr. Epic.* 445.

= *Teysmanni*, *Berk. in. Herb.* 2424.

620 caryophyllaceus, *B. & C. in Herb. Berk.* 2407.

621 gallinaceus, *B. & Cke. Linn. Journ.* xv. 379.

622 spathulatus (*Hook.*), *Fr. Epic.* 443.

- 623 squamæformis, *Berk. Hook. Journ.* 1852, 139.  
 624 manubriatus, *Lev. Zoll. Verz.* 17.  
 625 intonsus, *Berk. Fl. Tasm.* ii. 25.  
 626 crenatus, *Berk. Ann. Nat. Hist.* x. 372.  
 627 unguicularis, *Fr. Nova Symb.* 60.  
 628 microloma, *Lev. Ann. Sci. Nat.* 1844, 183.  
 629 pterygodes, *Fr. Epic.* 445.  
 630 nephelodes, *Lev. Ann. Sci. Nat.* 1846, 125.  
 631 lacerus, *Jungh. Fl. Java.*  
 632 multiformis, *Mont. Syll.* 156.  
 633 cinerascens, *Lev. Ann. Sci. Nat.* 1844, 184.  
     = *Leveillet*, *Cooke Enum. Poly.* 144.  
 634 sideroides, *Lev. Ann. Sci. Nat.* 1844, 182.  
 635 Blumei, *Lev. Ann. Sci. Nat.* 1844, 185.  
 636 notopus, *Lev. Ann. Sci. Nat.* 1844, 194.  
 637 ostreatus, *Lev. Ann. Sci. Nat.* 1846, 128.  
 638 brachypus, *Lev. Ann. Sci. Nat.* 1846, 127.  
 639 lenziteus, *Lev. Zoll. Verz.* 17.  
 640 asper, *Jungh. Fl. Java* 60.  
 641 cycliscus, *Mont. Syll.* 164.  
 642 virgineus, *Fr. Epic.* 481.  
     = *conchifer*, *Schw. Syn. Car.* 918.  
 643 ochrotinctus, *B. & C. Amer. Acad.* iv. 122.  
 644 albo-cervinus, *Berk. Hook. Journ.* 1856, 234.  
 645 Dietrichseni, *Fr. Nova Symb.* 60.  
 646 cervino-nitens, *Schwz. Ann. Nat. Hist.* xii. 433.  
 647 Baurii, *Kalch. Grev.* x. 53.  
 648 brunneolus, *Berk. Hook. Journ.* iii. 187.  
 649 modestus (*Kunze.*), *Fr. Epic.* 444.  
 650 Menziesii, *Berk. Linn. Journ.* xiv. 46.  
 651 murinus, *Lev. Ann. Sci. Nat.* 1844, 185 (? = 648).  
 652 microcyclus, *Lev. Ann. Sci. Nat.* 1844, 188.  
 653 malaiensis, *Cooke Grev.* xiv. 13.  
 654 discipes, *Berk. Hook. Journ.* 1847, 499.  
 655 peroxydatus, *Berk. Linn. Journ.* xvi. 38.  
 656 Königii, *Berk. Ann. Nat. Hist.* 1843, 373.  
 657 meleagris, *Berk. Linn. Journ.* xvi. 42.  
 658 Hostmanni, *Berk. Hook. Journ.* 1842, 138.  
     = *inconspicuus*, *Miq. Bull. Neerl.* (1839), 454.  
 659 confundens, *Ces. Fung. Born.*  
 660 brachyporus, *Mont. Syll.* 164.  
 661 nepalensis, *Berk. Hook. Journ.* 1852, 162.  
 662 libum, *Berk. Linn. Journ.* xiii. 163.  
 663 sanguineus, *Fr. Epicr.* 444 (not 127).  
 664 regius, *Miq. Tidjsch. Wis. Amst.* 1851, 191.

**\*\* HYDROPHILI.** *Pileo hygrophani, siccitate incurvo.*

- 665 russogramme, *Berk. Linn. Journ.* xvi. 45.  
 666 rasipes, *Berk. Linn. Journ.* xvi. 49.

667 hydrophilus, *B. & C. Linn. Journ.* x. 306.

668 rigescens, *Cooke Grev.* xiv. 12.

**D. Prolificantes.** Pileus coriaceus, tenuis, plus minus prolif-  
canti, multiplex in stipitem indefinitum (subinde deficientum) plus  
minus protractus.

669 prolificans, *Fr. Epic.* 443.

670 xalapensis, *Berk. Hook. Journ.* i. 103.

671 laceratus, *Berk. Ann. Nat. Hist.* 1839, 392.

672 elongatus, *Berk. Hook. Journ.* 1842, 149.

= *Hodgkinsoniæ*, *Kalch. Grev.* x. 96.

673 nilgherrensis, *Mont. Ann. Sci. Nat.* 1842, 22.

674 ornithorhynchi, *Kalch. Grev.* x. 96.

675 Kurzianus, *Cooke MSS.*

= *submembranaceus*, *Berk. Herb. No.* 2796.

676 multilobus, *Kalch. Grev.* x. 96.

677 ilicincola, *B. & C. in Rav. Fungi Car.* v. 17.

678 Friesii (*Klotsch.*), *Fr. Epic.* 480.

679 Fockei, *Miq. Tids. Wetens.* 1851, 190.

680 radiato-rugosus, *Berk. Ann. Nat. Hist.* iii. 323.

681 flabellum, *Mont. Cuba.* t. xv. f. 2.

682 subpellucidus, *Berk. Linn. Journ.* xvi. 51.

683 exiguis, *Cooke in Herb.*

684 plicatus, *Blume. Ann. Sci. Nat.* 1844, 185.

685 Gaudichaudi, *Lev. Ann. Sci. Nat.* 1844, 185.

686 rheicolor, *B. & C. Linn. Journ.* x. 303.

687 Splitgerberi, *Mont. Syll.* 102.

688 gallopavonis, *B. & Br. Linn. Trans.* i.

689 nebularis, *Cooke in Herb.*

690 hinnuleus, *B. & Cke. Linn. Journ.* xv. 378.

#### *Dubiæ.*

691 pæcilus, *Berk. Ann. Nat. Hist.* x. 372.

692 petalodes, *Berk. Hook. Journ.* 1856, 198.

**E. Funales, Fr.** Dimidiato, sessiles, strato intermedio hymeno-  
phoro coriaceo, superiori e fibris rudibus solutis umbricatis com-  
pacto.

693 mons-veneris, *Jung. Fl. Java.* 61.

694 leoninus, *Klot. Linn.* viii. 486.

695 leonotis, *Kalch. Grev.* iv. 73.

696 ursinus, *Fr. Sys. Myc.* i. 361.

697 funalis, *Fr. Epic.* 459.

698 stuppeus, *Berk. Ann. Nat. Hist.* vii. 1841, 453.

699 ozonoides, *Berk. Hook. Journ.* 1852, 166.

700 Fergussoni, *Berk. in Herb.* 3016.

- 701 Lindheimeri, *B. & C. Grev.* i. 66.
- 702 aculeifera, *B. & C. Cuba Fungi*, No. 305.
- 703 trichomallus, *B. & M. Mont. Syll.* 165.
- 704 holophæus, *Mont. Syll.* 163.
- 705 endothrix, *Berk. Hook. Journ.* 1857, 197.
- 706 cladotrichus, *B. & C. Cuba Fungi*, No. 225.
- 707 Perrotettii, *Lev. Ann. Sci. Nat.* 1844, 195.

**F. Stuposi.** Pileo e flocculose glabrato, adpresseve villosa, inæquabili azono, contextu fibroso-lignoso aut stippeo.

Pileo semper sicco, et a coriaceis zonis nullis discoloribus saltem manifestis diversi.

\* *Contextu albo.*

- 708 cervinus (*Schw.*), *Fr. Epic.* 474.
- 709 ravidus, *Fr. Hym. Eur.* 566.
- 710 villosus, *Fr. Epic.* 474.
- 711 albidus, *Trog. in Flora Schw.* 435.
- 712 fibula, *Fr. Hym. Eur.* 567.
- 713 expansus, *Fr. Epic.* 475.
- 714 biformis (*Klot.*) *Fr. Epic.* 475.  
= *Carolinensis*, *B. & C.*, *Hook. Journ.* 1849.  
var. *balsamifera*, *Klot. Linn.* 1833.
- 715 fimbriatus, *Fr. Epic.* 476.
- 716 serialis, *Fr. Sys. Myc.* i. 370.
- 717 molliusculus, *Berk. Hook. Journ.* 1847, 320.
- 718 gossypinus, *Lev. Ann. Sci. Nat.* 1843, 124.
- 719 apalus, *Lev. Ann. Sci. Nat.* 1843, 124.
- 720 hololeucus, *Kalch. Hedw.* xv. 114.
- 721 venulosus, *Jung. Fl. Java* 57.
- 722 hirtellus, *Fr. Nova Symb.* 66.
- 723 subflavus, *Lev. Ann. Sci. Nat.* 1846, 300.
- 724 nigrozonatus, *Sauter Hedw.* xv. 33.
- 725 proteiformis, *Cooke MSS.*  
= *proteus*, *Kalch. Grev.* x. 102. (*nec. Berk.*)
- 726 Sullivanti, *Mont. Syll.* 163.
- 727 pergamenus, *Fr. Epicr.* 480.  
= *pseudopergamenus*, *Thum.*, *Myc. Univ.*  
= *Menandrianus*, *Mont. Syll.* 165.

\*\* *Contextu pallido.*

- 728 seriatus, *Kalch. Grev.* x. 102.
- 729 actinobolus, *Mont. Syll.* 166.
- 730 sciurinus, *Kalch. Pilz. Fl. Sib.* 897.
- 731 scariosus, *B. & C. Grev.* i. 52.
- 732 cristatus, *Cooke Grev.* x. 132.
- 733 undigerus, *B. & C. Linn. Journ.* x. 317.

- 734 acutus, *Cooke Grev. x.* 132.  
 735 extensus, *Berk. in Herb. Hook.*  
 736 versatilis, *Berk. Hook. Journ. i.* 450.

\* *Contextu carneo v. lilacino.*  
 \*\*

- 737 pruinatus (*Klot.*), *Fr. Epic.* 473.  
 738 Feei, *Fr. Epic.* 476.  
 739 lilacino-gilvus, *Berk. Ann. Sci. Nat. iii.* 324.  
 740 Eucalypti, *Kalch. Grev. iv.* 73.  
 741 phæoporus, *Mont. Syll.* 165.

\*\* *Contextu rubro v. purpureo.*  
 \*\*\*

- 742 cinnabarinus, *Fr. Syst. Myc. i.* 371.  
 743 purpurascens (*Hook.*), *Fr. Epic.* 473.

\*\* *Contextu flavo v. aureo.*  
 \*\*\*

- 744 sordidulus, *Berk. in Cke. Enum.* 153.  
     = *sordidus* (B.), *Fr. Nova Symb.* 64.  
 745 sulfuratus, *Fr. Nova Symb.* 63.  
 746 aurantiacus, *Peck. 26 Rep.* 69.  
 747 radiatus, *Fr. Hym. Eur.* 565.  
     = *glomeratus*, *Peck. 24. Report* 78.  
 748 nodulosus, *Fr. Hym. Eur.* 566.  
 749 extenuatus, *Mont. Syll.* 166.  
 750 helvolus, *Fr. Elen.* 490.  
 751 chrysites, *Berk. Hook. Journ.* 1856, 233.

\*\*\* *Contextu fusco-ferrugineo.*  
 \*\*\*\*

- 752 triqueter (*Secr.*), *Fr. Hym. Eur.* 565.  
 753 leporinus, *Fr. Hym. Eur.* 565.  
 754 vulpinus, *Fr. Hym. Eur.* 565.  
 755 concrescens, *Mont. Syll.* 166.  
 756 campyloporus, *Mont. Syll.* 163.  
 757 inconstans, *Kalch. Grev. x.* 55.  
 758 proteus, *Fr. Fungi Nat.* 12.  
     = *Berk. Hook. Journ.* 1843, 414.  
 759 Ecklonii, *Berk. in Herb.*  
 760 floccosus, *Jungh. Fl. Java* 49.  
 761 venustus, *Berk. Hook. Journ.* 1845, 55.  
 762 floridanus, *Berk. Ann. Nat. Hist. x.* 376.  
 763 oniscus, *Fr. Nova Symb.* 66.  
 764 Lindbladii, *Berk. Grev. i.* 54.  
 765 indecorus, *Jungh. Fl. Java* 51.  
 766 nuceus, *Fr. Nova Symb.* 64.  
 767 corrugis, *Fr. Nova Symb.* 66.  
 768 chryssoleucus, *Kalch. Grev. iv.* 72. (= 838.)  
 769 candicans, *Lev. Ann. Sci. Nat.* 1863, 295.

G. **Coriacei.** Pileo dimidiato, sessili, coriaceo, zonato, contextu tenaci floccoso.

A. **Versicolores.** Contextu albo.

\* *Genuini.*

- 770 versicolor, *Fr. Hym. Eur.* 568.
- 771 fuscatus, *Fr. Hym. Eur.* 569.
- 772 armenicolor, *B. & C. Linn. Journ.* x. 315.
- 773 pictilis, *Berk. Hook. Journ.* 1852, 162.
- 774 rufopictus, *B. & C. in Herb. Berk.*
- 775 arenicolor *B. & C. Linn. Journ.* x. 315.
- 776 plumbeus, *Lev. Ann. Sci. Nat.* 1846, 136.
- 777 cinerellus, *Cooke Enum. Polyp.* 135.  
= *cinereus*, *Lev. Ann. Sci. Nat.* 1846, 140.
- 778 detonsus, *Fries Epic.* 478.
- 779 surinamensis, *Miq. Bull. Neerl. Ind.* 1839, 454.
- 780 illotus, *Kalch. Grev.* x. 102.
- 781 pavonius (*Hook.*) *Fr. Epic.* 477.
- 782 obstinatus, *Cooke Grev.* xii. 17.

\*\* *Hirsuti.*

- 783 hirsutus, *Fr. Hym. Eur.* 567.
- 784 galbanatus, *Berk. Ann. Nat. Hist.* 1842, 377.
- 785 velutinus, *Fr. Hym. Eur.* 568.  
= *nigricans*, *Lasch.*  
= *rugulosus*, *Lasch.*
- 786 hirsutululus, *Schw. Amer. Bor.* 373.
- 787 pocas, *Berk. Linn. Journ.* xvi. 51.
- 788 nigro-marginatus, *Schw. Syn. Car.* 912.
- 789 balsameus, *Peck. 30th Report.*
- 790 gausapatus, *Kalch. Grev.* x. 102.
- 791 zonatus, *Fr. Hym. Eur.* 568.
- 792 hædinus, *Berk. Hook. Journ.* 1856, 234.
- 793 glirinus, *Kalch. Grev.* iv. 72.  
= *murinus*, *Kalch.*
- 794 cineraceus, *Lev. Ann. Sci. Nat.* 1846, 139.
- 795 cæsio-glaucus, *Cooke Grev.* x. 121.
- 796 galberulosus, *Lev. Ann. Sci. Nat.* 1846, 129.
- 797 limbatus, *Fr. Epic.* 479.
- 798 pectunculus, *Lev. Ann. Sci. Nat.* 1846, 138.
- 799 vellereus, *Berk. Hook. Journ.* i. 455.
- 800 Meyeni, *Klotsch. Nova Acta. N.C.* xix. 236.
- 801 pinsitus, *Fr. Epicr.* 479.
- 802 decipiens, *Schw. Amer. Bor.* 385.
- 803 hypothejus, *Kalch. Grev.* x. 102.
- 804 brunneoalbus, *Fr. Nova Symb.* 78.  
= *brunneoleucus*, *Berk. Hook. Journ.* v. 4.



\* *Ectypi*. Pileo glabrescente.

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- 805 *ectypus*, *B. & C. Grev.* i. 52.  
 806 *trizonatus*, *Cke. Grev.* xii. 17.  
 807 *Kicksianus*, *Lev. Ann. Sci. Nat.* 1848, 122.  
 808 *chartaceus*, *B. & C. Grev.* i. 53.  
 809 *gratus*, *Berk. Hook. Journ.* 1852, 163.  
 810 *Wynnei* (*B. & Br.*), *Fr. Hym. Eur.* 569.  
 811 *sobrius*, *B. & C. Linn. Journ.* x. 316.

\*\* *Abietini*.

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- 812 *arcticus*, *Fr. Epic.* 479.  
 813 *abietinus*, *Fr. Hym. Eur.* 569.  
 814 *abnormis*, *Lev. Ann. Sci. Nat.* 1844, 186.  
 815 *parvulus*, *Schw. Amer. Bor.* 386.  
 816 *Lundii*, *Fr. Epic.* 479.  
 817 *umbonatus*, *Fr. Nova Symb.* 71.  
 818 *barbatulus*, *Fr. Nova Symb.* 71.  
 819 *cilicioides*, *Fr. Nova Symb.* 71.  
 820 *Sartwelli*, *B. & C. Grev.* i. 51.  
 821 *Hasseltii*, *Lev. Ann. Sci. Nat.* 1844, 187.  
 822 *dissectus*, *Lev. Ann. Sci. Nat.* 1846, 139.  
 823 *convolutus*, *Lev. Ann. Sci. Nat.* 1844, 186.  
 824 *confertus*, *Lev. Ann. Sci. Nat.* 1844, 187.  
 825 *tristis*, *Pers. Myc. Eur.* ii. 94.  
 826 *stereoides*, *Fr. Hym. Eur.* 569.  
 827 *cyphelloides*, *Fr. Nova Symb.* 72.

B. *Scortei*.\* *Contextu pallido*.

- 828 *cascus*, *Fr. Nova Symb.* 72.  
 829 *scorteus*, *Fr. Nova Symb.* 73.  
 830 *cingulatus*, *Fr. Epic.* 476.  
 831 *nigrocinctus*, *Berk. Ann. N. Hist.* x. 377.  
 832 *vittatus*, *Berk. Hook. Journ.* 1847, 505.  
 833 *myrrhinus*, *Kickx. Bull. Acad. Sci. Brux.* v. 370.  
 834 *psilodermus*, *Berk. & Mont. Syll.* 167.  
 835 *leiodermus*, *Mont. Syll.* 168.  
 836 *splendens*, *Lev. Ann. Sci. Nat.* 1844.  
 837 *personatus*, *Berk. & Br. Linn. Journ.* xiv. 51.  
 838 *peradeniæ*, *B. & Br. Linn. Journ.* xiv. 51.  
 839 *coriaceus*, *Lev. Ann. Sci. Nat.* 1846, 137.  
 840 *unguiformis*, *Lev. Ann. Sci. Nat.* 1846, 138.  
 841 *inquinatus*, *Lev. Ann. Sci. Nat.* 1846, 140.  
 842 *lenis*, *Lev. Ann. Sci. Nat.* 1848, 122.  
 843 *aleuritidis*, *Reich. Krypt. Hawai.* 8.  
 844 *planus*, *Peck. 31 Report N. Y. Mus.* 37.  
 845 *vernicifluus*, *Berk. Fl. Tasm.* ii. 254.

- 846 dubius, *Berk. Ann. Nat. Hist.* 1843, 374.  
 847 zeylanicus, *Berk. Ann. Nat. Hist.* 1843, 377.  
 848 holotephrus, *B. & C. Linn. Journ.* x. 315.  
 849 rigidus, *Lev. Ann. Sci. Nat.* 1844, 189.  
 850 Persoonii, *Fr.* (*Dædalea sanguinea*, *Klot.*).  
 851 Moseleii, *Berk. Linn. Journ.* xvi. 40.

**\*\* Contextu carneo.**

- 852 cupreus, *Berk. Ann. Nat. Hist.* 1839, 393.  
 853 cupreo-roseus, *Berk. Lond. Journ.* 1856, 233.  
 854 cupreo-vinosus, *Berk. in Herb. Berk.*

**C. Lutescentes.**

**\* Contextu fulvo-ferrugineo.**

- 855 lutescens, *Pers. Myc. Eur.* ii. 71.  
 856 torridus, *Fr. Epicr.* 490.  
 857 cyclodes, *Fr. Nova Symb.* 74.  
 858 lanatus, *Fr. Epicr.* 490.  
 859 occidentalis (*Klotsch.*), *Fr. Epicr.* 491.  
     = *malachodermus*, *Fr. in Herb. Berk.*  
     = *substrigosus*, *Berk. in Herb.*  
 860 rigidus, *Berk. Ann. Sci. Nat.* 1849, 240.  
 861 crocatus, *Fr. Epicr.* 477.  
 862 byrsinus, *Mont. Cub.* 391. (= 859.)  
 863 tephroleucus, *Berk. Hook. Journ.* 1852, 185.  
 864 neaniscus, *Berk. in Herb.*  
 865 comatus, *Fr. Nova. Symb.* 75.  
 866 Gerardi, *Berk., in Herb.* No. 2780.  
 867 corrugatus, *Lev. Ann. Sci. Nat.* 1846, 136.  
 868 sericellus, *Lev. Ann. Sci. Nat.* 1846, 125.  
 869 connexus, *Lev. Ann. Sci. Nat.* 1846, 135.  
 870 aculeatus, *Lev. Ann. Sci. Nat.* 1846, 137.  
 871 melaenus, *Lev. Ann. Sci. Nat.* 1846, 131.  
 872 Bonplandianus, *Lev. Ann. Sci. Nat.* 1846, 301.  
 873 cohærens, *Lev. Ann. Sci. Nat.* 1846, 132.  
 874 limitatus, *B. & C. Grev.* i. 63.  
 875 callimorphus, *Lev. Ann. Sci. Nat.* 1846, 132.  
 876 Swartzianus, *Lev. Ann. Sci. Nat.* 1846, 132.  
 877 guadelupensis, *Lev. Ann. Sci. Nat.* 1846, 134.  
 878 polyzonus (*Pers.*), *Fr. Epicr.* 477.  
 879 tricolor, *Lev. Ann. Sci. Nat.* 1846, 134.  
 880 platypilus, *Lev. Ann. Sci. Nat.* 1844, 192.

**\*\* Contextu flavo vel aureo.**

- 881 citreus, *Berk. Linn. Journ.* xiii. 162.  
 882 flavidus, *Berk. Hook. Journ.* 1852, 161.  
 883 xeranticus, *Berk. Hook. Journ.* 1852, 161.

## \* \* Contextu olivaceo.

- 884 aratus, *Berk. Linn. Journ.* xvi. 53.  
 = *Trametes acupunctatus*, *Berk. Linn. Journ.* XIII, 164.  
 885 luteo-olivaceus, *B. & Br. Linn. Trans.* i. 402.  
 886 purpureo-fuscus, *Cke. in Herb.*

## \*\* dubiæ.

- 887 rudis, *Lev. Ann. Sci. Nat.* 1846, 138.  
 = *subfulvus*, *Cke. Enum. Poly.* 153.  
 888 spurcus, *Lev. Ann. Sci. Nat.* 1846, 135.

D. *Caperati*.

## \* Contextu fusco.

- 889 Hasskarlii, *Lev. Ann. Sci. Nat.* 1844, 190.  
 890 tabacinus, *Mont. Syll.* 167.  
 891 iodinus, *Mont. Syll.* 167.  
 892 cichoraceus, *Berk. Fr. Nova Symb.* 76.  
 = *intybaceus*, *B. Hook. Journ.* i. 149.  
 893 setiporus, *Berk. Hook. Journ.* 1847, 505.  
 894 lienoides, *Mont. Syll.* 166.  
 895 spadiceus, *Jungh. Fl. Java* 54.  
 = *Javanicus*, *Cooke, Enum. Poly.*  
 896 badius, *Berk. Ann. Sci. Nat.* 1846.  
 897 xerampelinus, *Kalch. Grev.* iv. 72.  
 898 aculeans, *Berk. Hook. Journ.* 1856, 199.  
 899 xerophyllaceus, *Berk. Hook. Journ.* 1856, 199.  
 900 scytinus, *Berk. Ann. Nat. Hist.* x. 1842.  
 901 caperatus, *Berk. Ann. Nat. Hist.* 1839, 391.  
 902 cirrhiferus, *B. & C. Linn. Journ.* x. 314.  
 903 sulcifer, *B. & Cke. Linn. Journ.* xv. 383.  
 904 vibratilis, *B. & C. Linn. Journ.* x. 314.  
 905 fulvitinctus, *B. & C. Linn. Journ.* x. 313.  
 906 lineatus (*Pers.*), *Fr. Epic.* 477.  
 907 phocinus, *B. & Br. Linn. Journ.* xiv. 52.  
 908 phæus, *Lev. Ann. Sci. Nat.* 1846, 132.  
 909 fuscus, *Lev. Ann. Sci. Nat.* 1846, 137.

## \*\* Contextu purpureo-fusco.

- 910 æthiops, *Cooke Grev.* ix. 99.

H. *Membranacei*. Pileo papyraceo, tenuissimo, contextu toto longitudinaliter fibroso, nullo floccoso; poris brevissimis.

- 911 thelephoroides (*Hook.*), *Fr. Epic.* 473.  
 912 azureus *Fr. Nova Symb.* 77.  
 913 cinerascens (*Schw.*), *Fr. Epic.* 481.  
 914 sector (*Ehr.*), *Fr. Epic.* 480.

- 915 bivalvis (*Pers.*), *Fr. Epic.* 480.
- 916 striatus, *Fr. Epic.* 480.
- 917 Fernandesianus, *Mout. Syll.* 168.
- 918 Drummondi (*Klot.*), *Fr. Epic.* 481.
- 919 plumbosus, *Fr. Nova Symb.* 77.
- 920 papyraceus, *Fr. Epic.* 481.
- 921 breviporus, *Cooke Grev.* xii. 17.
- 922 membranaceus, *Fr. Epic.* 481.
- 923 submembranaceus, *Sauter. Hedw.* xv. 153.
- 924 tenuis, *Link. in Berl. Mag.*
- 925 tener, *Lev. Ann. Sci. Nat.* 1846, 139.
- 926 cervino-gilvus, *Jungh. Fl. Java* 45.
- 927 vespilloneus, *Berk. Hook. Journ.* 1856, 199.
- 928 tenuissimus, *Lev. Ann. Sci. Nat.* 1844, 188.
- 929 Braunii, *Rabh. Fungi Eur.* 2005.

I. **Subresupinati.** Pileo subresupinato vel margine reflexo.

- 930 catervatus, *Berk. Fl. New Zeal.* ii. 180.
- 931 beharensis, *Berk. Hook. Journ.* 1852, 163.
- 932 niveus, *Jungh. Fl. Java*, 48.
- 933 bireflexus, *B. & Br. Grev.* x. 101.
- 934 eriophorus, *B. & Br. Linn. Trans.* ii. 60.
- 935 evolvens, *Berk. Hook. Journ.* 1856, 253.
- 936 hymeninus, *Lev. Ann. Sci. Nat.* 1863, 295.
- 937 biferus, *Berk. & Glaz. Vid. Med. Kjob.* 1879, 31.
- 938 deglubens, *B. & C. in Curt. Cat.*
- 939 aggreiciens, *Berk. in Vid. Med. Kjob.* 1879, 31.
- 940 undatus, *Pers. Myc. Eur.* t. 16, f. 3.
- 941 Broomei, *Rabh. F. Eur.* 2004.
- 942 Ravenelii, *Berk. & Fr. in Nova Symb.* 66.
- 943 polymorphus, *Rostk. Poly.* iv. t. 56.
- 944 latus, *Berk. Ann. Nat. Hist.* iii. 325.
- 945 placentæformis, *B. & C. in Herb. Berk.*

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MICROTHAMNION VEXATOR, *Cooke.*

We regret to suppose that we have overlooked some previous description of this species. In "The Naturalist" for February, 1886, we note in a communication by W. B. Turner this species is cited as "*Microthamnion vexator* (*Turner*), *Cooke*," implying some previous description by Mr. Turner, of which we confess to be ignorant. Wishing to give all honour to whomsoever honour is due, we will correct this, provided Mr. Turner will oblige us with reference to the description which has precedence of ours under the above name. Otherwise, in the absence of such previous description, such an implication is scarcely justifiable.

## HEPATICÆ OF AMAZON AND ANDES.\*

No one possessing an interest in the Botany of the British Islands can look upon the volume now before us without a sigh of regret that the Hepaticæ of Great Britain are in a lamentable plight for lack of a monograph. It can hardly seem true that this part of our Flora has not been brought up to date for half a century, except a mere outline published at fourpence twenty years ago. It is true that a work was commenced by a very capable author a few years since, and collapsed at the fourth part; but wherefore it was never resumed, with all the plates ready, is a mystery never explained. Ill health and the encroachments of age are, we fear, strongly against the author of the present work being induced to supply the deficiency, which otherwise would be very safe in his hands.

It is many years since Mr. Richard Spruce made his remarkable collections of cryptogamic plants in South America, and through the latter portion of that time this work has been maturing itself in his mind, and we congratulate him on sufficient health and strength having been left to him to bring it thus far towards completion, for we are informed in a prefatory note that "the additional matter on the physical features of the regions explored, and their connection with the vegetation—especially the hepatic vegetation—with critical remarks on certain of the genera and species, the author proposes (if he is able to complete it) to issue in the shape of a supplement to the work."

We have no intention of entering upon any detailed critical examination of the work before us; indeed, such details would hardly commend themselves to the general reader, and, on the whole, we may assert, without contradiction, that not only is Mr. Spruce entirely at home with the Hepaticæ, but he has worked out his monograph carefully, and with a masterly hand. This volume will undoubtedly prove itself a worthy monument of his labours. It may be that he has toiled through a long life in the pursuit of his favourite branches of Natural History, without much pecuniary remuneration or any great increment of worldly goods, yet he has the satisfaction of knowing that he has worked honestly and well. This volume, moderate in price, clear and neat in arrangement, typographical reproduction, and illustration, is recommended not only to all Natural History Societies, but to all individual naturalists who desire to have on their bookshelves the best works in all branches of systematic botany. And we venture to think that this will be one of the favoured few which will augment in value with the lapse of time.

\* "Hepaticæ of the Amazon and of the Andes of Peru and Ecuador," by Richard Spruce, 588 pp., 22 plates, 8vo. Trübner and Co.

## SOME EXOTIC FUNGI.

By M. C. COOKE.

## INDIA.

**Agaricus (Armillaria) rhizopus, Cooke.**

Albidus. Pileo carnoso, e convexo expanso, obtuso, glabro, demum tessulato-sulcato, stipite farcto, subfistuloso, ventricosus, deorsum attenuato, radicato, demum strigosus, annulo amplo, infero, patente; lamellis leviter adnatis, subdistantibus, albidis.

On clay soil, left by falling of rivers, and mostly attached to roots of grass, sedges, &c. Delimitation Commission, Afghanistan, 1884-5. (J. E. T. Aitcheson, No 167.)

Pileus 1-2 in., stem 2-3 in. long,  $\frac{1}{4}$  in. thick.

**Agaricus (Collybia).**

Beyond campanulate pileus, and stem much thickened downwards, nothing can be determined without further information. (Aitcheson, No. 172.)

**Cronartium capparis, Hobson.**

Hypophyllum. Filamentis curvulis, intricatis, fuscis. Sporis ellipticis, utrinque subattenuatis fuscis ( $\cdot 026\text{--}028 \times \cdot 014\text{--}017$  mm.).

On leaves of *Capparis*. Belgaum, Bombay. (Maj.-Gen. Hobson.)

## AUSTRALASIA.

**Phyllosticta palmicola, Cke.**

Maculis irregularibus, amphigenis, albido-cinereis, margine subelevato fusco; peritheciis subinnatis, atris, minutis, pertusis, plerumque numerosissimis. Sporulis elliptico-cylindraceis, hyalinis ( $\cdot 5 \times \cdot 2$  mm.).

On palm leaves. Daintree, Australia.

**Septoria Colensoi, Cooke.**

Maculis suborbicularibus, albidis, margine elevato, purpureo-lineato. Peritheciis paucis, semi-immersis, punctiformibus, atris. Sporulis rectis flexuosisve, linearibus, multinucleatis, hyalinis ( $\cdot 05 \times \cdot 001$  mm.).

On thick leaves of unknown plant (suffruticose?). New Zealand. (Colenso, 6579.)

**Uredo Celmisiae, Cooke.**

Epiphylla. Maculis oblitteratis. Soris ellipticis, pallidis, epidermide diu clausâ, demum disrumpente. Sporulis ovalibus, subpellucidis, verruculosus ( $\cdot 03\text{--}035 \times \cdot 02\text{--}022$  mm.).

On leaves of *Celmisia coriacea*. Arthur's Pass, New Zealand. (Kirk, 252.)

Colour of the sporules, when fresh, not indicated.

**Æcidium Discariae, Cke.**

Hypophyllum. Maculis orbicularibus, fuscis. Peridiis cupulæformibus, semi-immersis, congestis; margine fimbriato albo. Sporulis ovalibus, flavidis.

On *Discaria* leaves. Wellington, New Zealand. (Kirk, 215.)

**Sphaerella rubiginosa, Cke.**

Epiphylla. Peritheciis sparsis, minutis, punctiformibus, subprominulis, atris. Ascis clavatis, sessilibus. Sporidiis ellipticis, obtusis, medio leniter constrictis, uniseptatis, chlorinis ( $0.01 \times 0.005$  mm.).

On dead leaves of *Pittosporum rubiginosum*. Johnston River, Queensland.

Quite different from *Sphaerella pittospori*, Cke., although the fructification is similar.

## NORTH AMERICA.

**Leptothyrium liriodendri, Cke.**

Peritheciis in macula exarida fusca sparsis, epiphyllis, disciformibus, nitidis, plano-convexis, atris, minutis. Sporulis cylindraceis, curvulis rectisque, tenuibus, hyalinis ( $0.005 \times 0.001$  mm.).

On leaves of *Liriodendron*. Aiken, S. Car. (Ravenal, 2600.)

Associated with *Hysterium maculare* forma *Liriodendri*.

**Phoma cerasina, Cooke.**

Epiphylla. Peritheciis punctiformibus, densissime gregariis, semiimmersis, atris, nitidis, poro pertusis. Sporulis subcylindricis, utrinque rotundatis, rectis, enucleatis, hyalinis,  $0.015-0.016 \times 0.0035$  mm.

On dead leaves of *Prunus lauro-cerasus*. Aiken, S. Car. (Ravenal, 2573 bis.)

## NEW BRITISH FUNGI.

(Continued from p. 41.)

**Phoma galacis, Cooke.**

Spots irregular, pale brown or cinereous, without any distinct margin. Perithecia gregarious in dense patches, very minute ( $0.08$  mm. diam.), immersed at the base, punctiform, black, shining. Sporules cylindrical, rounded at the ends, 2-4 nucleate, hyaline ( $0.012-0.015 \times 0.004$  mm.).

On fading and dead leaves of *Galax aphylla*. Kew.

**Phyllosticta pentestemonis, Cooke.**

Spots irregular, brown, without distinct margin. Perithecia subimmersed, mostly concentrically disposed, sometimes scattered, punctiform, black. Sporules ovoid-oblong or elliptic, hyaline ( $0.005 \times 0.003$  mm.).

On leaves of *Pentstemon grandiflorus*. Kew.

**Ustilago marina, Durieu. Rabh. F. Eur., 1199.**

Mycelium black, forming tubercles on the rhizomes. Spores of two forms, one globular or obtusely ovoid, or elongated ( $0.01-0.013$  mm.), the other irregularly ovoid, elongated ( $0.016 \times 0.01-0.013$  mm.), clear olive-brown, with a smooth epispore.—Waldh. *Ustilag.*, No. 27.

On the rhizomes of *Scirpus parvulus*. Little Lea, near Poole, Dorset. (E. M. Holmes.)

## HANDBOOK OF MOSSES.\*

This very handy and useful little Handbook is really a wonderful shilling's worth, and gives an excellent introduction to the study of mosses. Any one who knows what a careful botanist Mr. Bagnall is would naturally expect from him a most trustworthy guide in his favourite pursuit. Amongst Bryologists, certainly, there will be very few who do not know our author by name or correspondence, and those who know him personally will feel pleased that he has overcome his diffidence and reserve so far as to publish this little "Handbook" for beginners. An enumeration of the successive chapters will give a fair synopsis of the work: Appliances and Material Required for the Study; Development; Moss Habitats; Classification; The Geographical Distribution of Mosses; Cultivation; Uses; Preparing Specimens for the Cabinet and Herbarium.

When we add that there are 39 woodcut illustrations, that the paper and printing is good, and the matter excellent, no one can hesitate to order copies, and present them to youths of both sexes, so as to induce a few, even if only a few, of the rising generation to acquire a taste for, and a desire to pursue still further, the study of mosses.

## A NEW BRITISH LICHEN.

BY THE REV. W. JOHNSON.

In recently examining a gathering of lichens made in Weardale, Durham, some time ago, I had the pleasure of turning up the following new species, which, as such, seems distinct and definite in its individual characteristics:—

***Lecanora Weardalensis*, Johns.**

Thallus determinate, thin, smooth, rimulose, virescenti-cinereous; apothecia immersed in thallus, then emergent, fuscous, with prominent depressed proper margin; thalline margin more or less circumscised; hymenium fuscous; paraphyses slender, spores eight, rather large, oblongo-ellipsoid, simple, colourless; gelatina hymenia blue with iodine, then vinoso-fulvescent. Thallus K— C—.

On sandstone in subalpine places. Rare. Lanehead, Weardale, Durham, 1879.

\* "Handbook of Mosses," by James E. Bagnall, A.L.S. Cloth, with cuts; 96 pp. Swan Sonnenschein and Co.



## ILLUSTRATIONS OF BRITISH FUNGI.

The third and fourth volumes of this work are now completed with the 39th part, reaching 622 coloured plates of species belonging to the genus *Agaricus*. This will undoubtedly be the most complete illustrated work on the gill-bearing Hymenomycetes ever attempted, and with the fortieth part another two volumes, which it is hoped may conclude the present series, will be commenced. The genera still remaining to be illustrated are *Coprinus*, *Bolbitius*, *Cortinarius*, *Gomphidius*, *Paxillus*, *Hygrophorus*, *Lactarius*, *Russula*, *Cantharellus*, *Nyctalis*, *Marasmius*, *Lentinus*, *Panus*, *Xerotus*, *Trogia*, *Schizophyllum*, and *Lenzites*. There must be some hesitation in affirming that such a number of genera can be compressed into two volumes, since calculation in advance is scarcely possible, but should it extend to three volumes, subscribers will surely prefer that alternative to bringing the work to a premature and imperfect conclusion. The *Polyporei* and *Hydnei* and other orders of the *Hymenomycetes*, might form the subjects of a second series, but on that point nothing can be determined until the present series is complete, which will probably occupy three years. The publication of the descriptions of species figured in the 3rd and 4th volumes is resumed at the end of the current number of this journal, and will be continued without intermission.

**IRISH FUNGI.**—We have received a “preliminary report on the Fungi of Glengarriff and Killarney,” by Greenwood Pim, M.A., F.L.S., and although very scanty, a good commencement, which we hope may lead to a more complete list. The Sphærospideæ are represented by a single species, and the Hyphomycetes by two, hence it is very clear that a great deal still remains to be done.

**BRITISH DESMIDS.**—A circular has been issued with a proposal to commence a companion volume to Cooke’s “Fresh Water Algæ,” containing coloured figures and descriptions of the Desmids of Great Britain, as soon as sufficient subscribers can be obtained to warrant the venture. It is calculated to occupy about ten parts, each with eight plates, at five shillings per part, and may be concluded in about a year. The names of subscribers are being sent in very slowly, and unless the limit of 200 subscribers is obtained, the project will be abandoned. Numerous letters from all parts having been received urging the publication of such a work, the editor has resolved upon putting the question to a practical test whether the issue of such a volume would ensure sufficient support to secure him from pecuniary loss. All who are willing to assist should send their names immediately to the Editor, 146, Junction Road, London, N.

## SYNOPSIS PYRENOMYCETUM.

(Continued from p. 56.)

2195. **Eutypa viburni**, Berk. in Herb. No. 8827. Sphæria viburni, Schwein. Syn. Car. No. 58.

Composita, bullosa, sub-epidermide lutescente assurgens, solis perforantibus epidermidem ostiolis nigris, stromate candido. Asci clavatis. Sporidiis allantoideis.

On branches of *Viburnum prunifolium*.

Pustules half an inch broad.

2181. **Eutypa milliaria**, var. **leptoplaca**, Oks. Sphæria leptoplaca, D. R. & Mont. in Herb. Berk. 8796.

Stromate effuso, pallide cinereo, peritheciis minoribus confertioribus, ostiolis densioribus, ut in typis semi-magnitudinis. Sporidiis 0005-0006 mm., vix excedentibus.

On the disc of branches.

2196. **Eutypa lavateræ**, Duby. in Herb. Kewensis.

Late effusa, nigra, ligno immersa, peritheciis globosis, sparsis, ostiolis exsertis conicis, plerumque spiniformibus. Asci clavatis. Sporidiis allantoideis, hyalinis, utrinque nucleolatis (0046 mm. long).

On stems of *Lavatera arborea*, near Cannes.

Fam. 7. **EUTYPÆ**. Stroma late et indefinite effusum, ex matrice plus v. minus mutata. Perithecia stromati immersa, plerumque dense et late gregaria.

GEN. 1. **CRYPTOVALSA**, Ces. Stroma effusum, eutypeum. Asci polyspori. Sporidia allantoidea, hyalina.

2136. protracta, Pers. ...	690	2144. Rabenhorstii, N....	698
2137. ampelina, N. ...	691	2145. arundinacea, S. ...	699
2138. Nitschkei, Fckl. ...	692	2146. depressa, Fr. ...	700
2139. pruni, Fckl. ...	693	2147. citri, Catt. ...	701
2140. effusa, Fckl. ...	694	2148. elevata, B. ...	702
2141. uberrima, Tul. ...	695	2149. rubi, Pass. ...	5906
2142. platensis, Speg. ...	696	2150. eutypæformis, Sacc. ...	5907
2143. extorris, Sacc. ...	697		

GEN. 2. **EUTYPÆ**, Tul. Stroma late effusum, corticale v. ligneum; ostiola parva. Asci octospori. Sporidia allantoidea hyalina.

a. *Ostiola radiatim sulcata*.

2151. Acharii, Tul. ...	618	2155. crustata, Fr. ...	622
2152. tuyutensis, Speg....	619	2156. subsecta, Fr. ...	623
2153. aspera, Nke. ...	620	2157. subcutanea, Wahl. ...	624
2154. cyclospora, Nke. ...	621	2158. polycocca, Fr. ...	625

2159. polymorpha, <i>Nke.</i>	626	2166. ludebunda, <i>Sacc.</i> ...	632
2160. maura, <i>Fr.</i>	... 627	2167. arundinacea, <i>Sacc.</i>	633
2161. mela, <i>Schw.</i>	... 4167	2168. alsophila, <i>D.R. &amp; M.</i>	634
2162. aulacostoma, <i>Kze.</i>	628	2169. spinosa, <i>Pers.</i>	... 635
2163. tetragona, <i>Duby.</i> ...	629	(= <i>limæformis</i> , <i>Schw.</i> )	
2164. referciens, <i>Nke.</i>	... 630	2170. anomala, <i>Not.</i>	... 636
2165. leprosa, <i>Pers.</i>	... 631		

b. *Ostiola non sulcata.*

2171. lata, <i>Pers.</i>	... 637	2185. leucostroma, <i>M.</i> ...	651
2172. leioplaca, <i>Fr.</i>	... 638	2186. rhodi, <i>Nke.</i>	... 652
2173. luteobasis, <i>Ellis.</i> ...	639	2187. ambigua, <i>Kze.</i>	... 653
2174. scabrosa, <i>Bull.</i>	... 640	2188. velutina, <i>Wallr.</i> ...	654
2175. laevata, <i>Nke.</i>	... 641	2189. dimorpha, <i>B. &amp; C.</i>	655
2176. prorumpens, <i>Wallr.</i>	642	2190. comosa, <i>Speg.</i>	... 656
2177. flavo-virens, <i>Tul.</i>	643	2191. heteracantha, <i>Sacc.</i>	657
2178. enteroxantha, <i>B.</i> ...	644	2192. atomæspora, <i>C. &amp; E.</i>	5904
2179. macrospora, <i>Nke.</i> ...	645	2193. bellula, <i>Desm.</i>	... 658
2180. mauroides, <i>Nke.</i>	... 646	2194. sepulta, <i>B. &amp; C.</i> ...	659
2181. nitida, <i>Nke.</i>	... 647	2195. sycina, <i>Mont.</i>	... 660
2182. fraxini, <i>Nke.</i>	... 648	2196. julii, <i>Fab.</i>	... 661
2183. milliaris, <i>Fr.</i>	... 649	2197. viburni ( <i>Schw.</i> ). <i>B.</i>	
var. leptoplaca, <i>D. R.</i>		<i>Grev.</i> xiv. 93	
& <i>M. Grev.</i> xiv. 93		2198. lavateræ, <i>Duby.</i>	
2184. aneirina, <i>Somm.</i>	... 650	<i>Grev.</i> xiv. 93	

c. *Ostiola incerta.*

2199. microcarpa, <i>Fr.</i>	... 662	2207. urticaria, <i>M.</i>	... 671
2200. penes, <i>B. &amp; Br.</i>	... 663	2208. oppansa, <i>Fr.</i>	... 4160
2201. phaselina, <i>M.</i>	... 664	2209. mori-rubræ, <i>Schw.</i>	4166
2202. micropuncta, <i>Cke.</i>	665	2210. elevans, <i>Schw.</i>	... 4169
2203. micromeria, <i>M.</i>	... 666	2211. denigrata, <i>Schw.</i> ...	4170
2204. rhyodes, <i>B &amp; C.</i> ...	667	2212. confusa, <i>Schw.</i>	... 4171
2205. ulicis ( <i>Fr.</i> ), <i>Berk.</i>	668	2213. allostoma, <i>Schw.</i> ...	4196
2206. Crouani, <i>Sacc.</i>	... 670		

GEN. 3. **DIAPORTHE**, *Ntke. Sacc. Syll.* I., 606. Stroma eutypeum. Sporidia fusioidea vel subellipsoidea uniseptata, plerumque 4-guttata, hyalina, mutica, v. appendiculata.

\* **EUPORTHE**. Peritheciis gregariis ligno superficie tandem denigrato intusque nigra circumscripto immersis.

a. *In Dicotyledoneis arboreis.*

2214. eres, <i>Nke.</i>	... 2443	2218. abdita, <i>S. &amp; S.</i>	... 2447
2215. Malbranchei, <i>Sacc.</i>	2444	2219. orientalis, <i>S. &amp; S.</i>	2448
2216. sordida, <i>Nke.</i>	... 2445	2220. spiculosa, <i>A. &amp; S.</i>	2450
2217. aucubæ, <i>Sacc.</i>	... 2446	2221. sociabilis, <i>Nke.</i>	... 2449
= <i>ineularis</i> , <i>Berk.</i> in Herb.		2222. tropicalis, <i>Speg.</i>	... 2451

2223. *tumulata*, *C. & E.* 2452    2247. *coronillæ*, *Dy.* ... 2475  
 2224. *valida*, *Nke.* ... 2453    2248. *castrensis*, *Speg.* ... 2476  
 2225. *viticola*, *Nke.* ... 2454    2249. *brachyceras*, *Sacc.* 2477  
 2226. *Badhami*, *Curr.* ... 2455    2250. *biglobosa*, *C. & E.* 2478  
 2227. *subpyramidata*, *B.* ... 2456    2251. *australis*, *S. & S.* 2479  
       *& C.* ... 2456    2252. *americana*, *Speg.*... 2480  
 2228. *spinosula*, *K.* ... 2457    2253. *parabolica*, *Fckl.*... 2481  
 2229. *quilmensis*, *Speg.* ... 2458    2254. *Fuckelii*, *Kze.* ... 2482  
 2230. *pulla*, *Nke.* ... 2459    2255. *sorbariæ*, *Nke.* ... 2483  
 2231. *fallaciosa*, *Nke.* ... 2460    2256. *simulans*, *Sacc.* ... 2484  
 2232. *protracta*, *Nke.* ... 2461    2257. *japonica*, *Sacc.* ... 2485  
 2233. *petiolorum*, *S. & S.* 2462    2258. *semi immersa*, *Nke.* 2486  
 2234. *nigricolor*, *Nke.* ... 2463    2259. *Cœmansii*, *Nke.* ... 2487  
 2235. *meridionalis*, *S.* ... 2464    2260. *ceuthosporoides*, *B.* 2488  
 2236. *geographica*, *Fckl.* 2465    2261. *samaricola*, *Plow.*... 2489  
 2237. *meduseæa*, *Nke.* ... 2466    2262. *griseo-tingens*, *B. &*  
       *C.* ... 2490  
 2238. *gorgonoidea*, *C. & Hk.*  
       *Grev.* iii, 18.    2263. *pinophylla*, *P. & Pl.* 2491  
 2239. *fasciculata*, *Nke.* ... 2467    2264. *conorum*, *Desm.* ... 2492  
 2240. *forabilis*, *Nke.* ... 2468    2265. *occulta*, *Fckl.* ... 2493  
 2241. *floresiana*, *Sp.* ... 2469    2266. *concrescens*, *Schw.* 4172  
 2242. *extorris*, *S.* ... 2470    2267. *leucostroma*, *Nke.*  
       *Fckl.* ... 1989  
 2243. *culta*, *S. & S.* ... 2471    2268. *ilicina*, *Cooke F.B.* II. 490  
 2244. *cryptica*, *Nke.* ... 2472    2269. *keulreuteriæ*, *Dur.* 2643  
 2245. *crassicolis*, *Nke.* ... 2473  
 2246. *rhynchophora*, *Fab.* 2474

*b. In Dicotyledoneis herbaceis.*

2270. *Berkeleyi*, *Desm.*... 2494    2290. *adunca*, *Desm.* ... 2514  
 2271. *fæniculacea*, *Nsl.*... 2495    2291. *demissa*, *Sacc.* ... 2515  
 2272. *picea*, *P.* ... 2496    2292. *discors*, *Sacc.* ... 2516  
 2273. *nigrella*, *Awd.* ... 2497    2293. *euphorbiæ*, *Cke.* ... 2517  
 2274. *tetraspora*, *Sacc.*... 2498    2294. *incrustans*, *Nke.* ... 2518  
 2275. *denigrata*, *Wint.*... 2499    2295. *minuscula*, *S. & S.* 2519  
 2276. *Faberi*, *Kze.* ... 2500    2296. *muralis*, *Sp.* ... 2520  
 2277. *inquilina*, *Wall.* ... 2501    2297. *neapolitana*, *Sacc.* 2521  
 2278. *eburensis*, *Sacc.* ... 2502    2298. *obsoleta*, *Sacc.* ... 2522  
 2279. *grammodes*, *Not.*... 2503    2299. *vinçæ*, *Cke.* ... 2523  
 2280. *orthoceros*, *Fr.* ... 2504    2300. *Desmazierii*, *Nsl.*... 2524  
 2281. *trinucleata*, *Not.* ... 2505    2301. *salviæcola*, *C. & E.* 2525  
 2282. *phleodes*, *M.* ... 2506    2302. *Tulasnei*, *Nke.* ... 2526  
 2283. *perexigua*, *Sacc.* ... 2507    2303. *canina*, *Sacc.* ... 2527  
 2284. *linearis*, *Nke.* ... 2508    2304. *semi insculpta*, *Sacc.* 2528  
 2285. *indica*, *S. & S.* ... 2509    2305. *pratensis*, *Sacc.* ... 2529  
 2286. *immersa*, *Fckl.* ... 2510    2306. *Winteri*, *Kze.* ... 2530  
 2287. *acus*, *Blox.* ... 2511    2307. *Chailletii*, *Nke.* ... 2531  
 2288. *arctii*, *Lasch.* ... 2512    2308. *dulcamaræ*, *Nke.* 2532  
 2289. *phaceliæ*, *C. & Hk.* 2513    2309. *pampeana*, *Speg.*... 2533





**Nostoc hyalinum**, *Bennett in Journ. Roy. Micr. Soc.* 1886, p. 4, t. 1, f. 2, 3.

Free swimming, very minute. Gelatinous envelope globose or slightly ellipsoidal, 0.21 mm. in diameter, lamellose, perfectly colourless and transparent. Trichomes single in each envelope, interwoven. Cells ellipsoidal or nearly globose, green,  $5\mu$  in diameter (about forty to the length of the envelope). Heterocysts intercalary, very few in number, three to four in each envelope, spherical, green, 6-7 $\mu$  in diameter.

In a bog pool. Loughrigg Fell.

[It is difficult to recognise any substantial specific difference between this and *N. minutissimum*, Kutz.].

**Pediastrum compactum**, *Bennett Journ. Roy. Micr. Soc.* 1886, p. 5, t. 1, f. 4, 5.

Cænobium oval and perfectly regular, 0.09-0.16 mm. in length (or probably more), rather more than half as broad as long. Periphery composed of 32 lunate cells (in the smaller specimens) with two somewhat divergent, very slender, tapering, not bidentate horns, quite as long as the cells themselves. Inner cells irregularly polygonal and densely packed, without any lacunæ, in 2-4 rows. Cænobium invested with a distinct gelatinous envelope. Endochrome yellow-green, that of the peripheral cells of a deeper colour, which gives the appearance, under a low power, of a deep green border. Length of cells about 6 $\mu$ .

Bog pools. Loughrigg.

**Mesocarpus ? neaumensis**, *Bennett Journ. Micr. Soc.* 1886, p. 15, t. 2 f. 31, 32.

Sterile cells, 25 $\mu$  long by 20-25 $\mu$  broad. Endochrome in a single axile plate, with one row of large starch corpuscles, and numerous smaller ones. Conjugation lateral, between two adjacent cells. Fertile cells somewhat ventricose, 200 $\mu$  long by 50 $\mu$  broad at the widest part, connected with the adjoining empty cell by an elbow 50 $\mu$  broad, across which the dividing septum reaches only about half way. Zygosperm oval, 90 $\mu$  by 40 $\mu$ , always nearer to the end of the cell where conjugation has taken place; cell wall of zygosperm quite smooth.

In a duck-pond. Neaum Crag, Skelwith Bridge.

**Zygnema Hassallii**, *Bennett, l. c.*

We have to thank Mr. Bennett for reminding us that *Zygnema anomalum*, Cooke "Fresh Water Algæ," is not the *Zygnema anomalum*, Kützing, and therefore he substitutes the above name, which we do not accept. Kützing's species was subsequent to Hassall's, was supposed by Kützing to be the same as Hassall's species, and when we pointed out that it was not, it was our impression that it was Kützing's specific name that should be changed (as it originated in an error of Kützing) and not that of the true original *Z. anomalum*. To this we shall adhere, and recommend that the continental species shall abandon the name in favour of

*Zygnema Kutzingii* or any other, except the false name under which it has surreptitiously flourished.

**Oncythenema Nordstedtiana**, *Turner Journ. Roy. Micr. Soc.* 1865, 934 t. 15, f. 3.

Cells forming filaments of fifty or sixty cells or more, connected, by the curious sub-capitate clasppers peculiar to this genus. Without these processes the cells resemble smooth *Cosmaria*, as they do not possess the hooklets (at the ends of the segments) which pertain to *O. uncinatum*, W., and *O. læve*, Nord. Chlorophyll confluent.

SIZE.  $14\mu$  long  $\times$   $18\mu$  broad. Gelatinous sheath,  $36-40\mu$  broad, Isthmus,  $3-4\mu$ .

Strensall Common, near York.

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## BRITISH SPHÆROPSIDÆ.

## PROVISIONAL LIST OF SPECIES HITHERTO FOUND IN THE BRITISH ISLANDS.

By M. C. COOKE.

(Continued from p. 76.)

479. *Septoria viburni*, West. Sacc. Syll. 2657.  
On *Viburnum opulus*. Hampstead; Darenth; Glamis.
480. *Septoria stemmatea*, Fr. Sacc. Syll. 2660.  
On leaves of *Vaccinium*. Tay; Ross (N.B.).
481. *Septoria unedonis*, Desm. Sacc. Syll. 2661.  
On leaves of *Arbutus unedo*. Highgate; Dereham; Shrewsbury; Glasgow; Glamis.
482. *Septoria fraxini*, Fr. Sacc. Syll. 2672.  
On ash leaves. Shere; Bungay; Tay; Moray (N.B.).
483. *Septoria ligustri*, Desm. Sacc. Syll. 2681.  
On privet leaves. Kew.
484. *Septoria salicicola*, Fr. Sacc. Syll. 2711.  
On willow leaves. Audley End.
485. *Septoria populi*, Desm. Sacc. Syll. 2712.  
On poplar leaves. Swanscombe; Holloway.
486. *Septoria castanicola*, Desm. Sacc. Syll. 2723.  
On chestnut leaves. Minstead; Bungay; Dinmore; Darenth; Ascot; Lyndhurst; Forres.
487. *Septoria quercicola*, Sacc. Syll. 2726.  
On oak leaves. Darenth.
488. *Septoria alnicola*, Cooke. Sacc. Syll. 2735.  
On alder leaves. Shere.
- B. On Herbaceous Dicotyledons.
489. *Septoria astragali*, Desm. Sacc. Syll. 2748.  
On *Astragalus*. Darenth (F. B. I., 141).
490. *Septoria gei*, Rob. Sacc. Syll. 2763.  
On *Geum urbanum*. Darenth (F. B. I., 138); Lyndhurst; Shere; Brechin; Glamis; Dee (N.B.).
491. *Septoria tormentillæ*, Desm. Sacc. Syll. 2766.  
On *Tormentilla erecta*. Bishop's Wood, Highgate.
492. *Septoria fragariæ*, Desm. Sacc. Syll. 2767.  
On *Fragaria vesca*, &c. Hampstead.
493. *Septoria epilobii*, West. Sacc. Syll. 2781.  
On *Epilobium*. Darenth; Shere; Lyndhurst; Twycross; Brechin; Moray (N.B.).
494. *Septoria Enotheræ*, West. Sacc. Syll. 2782.  
On *Enothera biennis*. Highgate; Whitehall (F. B. I., 428).

495. *Septoria geranii*, Rob. Sacc. Syll. 2785.  
On *Geranium Robertianum*. Hackney.
496. *Septoria hyperici*, Desm. Sacc. Syll. 2791.  
On *Hypericum elodes*. Lyndhurst.  
On *H. montanum*, &c. Dinmore; Ross; Appin; Glamis.
497. *Septoria saponariæ*, D.C. Sacc. Syll. 2797.  
On *Silene inflata*. Leatherhead.
498. *Septoria stellaris*, Rob. Sacc. Syll. 2806.  
On *Stellaria media*. Forden; Forres; Aberdeen.
499. *Septoria cerastii*, Desm. Sacc. Syll. 2808.  
On *Cerastium*. Menmuir.
500. *Septoria scleranthi*, Desm. Sacc. Syll. 2810.  
On *Scleranthus*. Bungay.
501. *Septoria violæ*, West. Sacc. Syll. 2811.  
On *Viola*. King's Cliffe.
502. *Septoria lepidii*, Desm. Sacc. Syll. 2817.  
On *Lepidium*. Penzance; New Pitsligo; near Glasgow;  
Montrose Basin.
503. *Septoria chelidonii*, Desm. Sacc. Syll. 2827.  
On *Chelidonium*. Albury; Irstead; Kew; N. Wales.
504. *Septoria anemones*, Desm. Sacc. Syll. 2828.  
On *Anemone nemorosa*. Highgate; Darenth.
505. *Septoria hepaticæ*, Desm. Sacc. Syll. 2830.  
On *Hepatica triloba*. Forden.
506. *Septoria ficariæ*, Desm. Sacc. Syll. 2833.  
On *Ficaria ranunculoides*. Highgate (F. B. I., 131; II., 38);  
Moray; Tay; Dee; Clyde (N.B.).
507. *Septoria hellebori*, Thum. Sacc. Syll. 2840.  
On *Helleborus niger*. Kew.
508. *Septoria clematidis*, Rob. Sacc. Syll. 2841.  
On *Clematis vitalba*. Dartford; Tay.
509. *Septoria sedi*, West. Sacc. Syll. 2858.  
On *Sedum*. Bungay (F. B. I., 133).
510. *Septoria heraclei*, Desm. Sacc. Syll. 2864.  
On *Heracleum*. Highgate (F. B. I., 427); Forden; Shere;  
Bala; Glamis; Tay. Query—If not a good *Phleospora*?
511. *Septoria podagrariæ*, Lasch. Sacc. Syll. 2872.  
On *Ægopodium*. Whitehaven; Ashmanhaugh; Bungay  
(F. B. I., 146); New Pitsligo; Tweed; Tay; Dee; Moray;  
Clyde (N.B.).
512. *Septoria petroselinii*, Lib. Sacc. Syll. 2876.  
On parsley leaves. Glamis; Aberdeen.
513. *Septoria hydrocotyles*, Desm. Sacc. Syll. 2881.  
On *Hydrocotyle vulgaris*. Epping (F. B. I., 134; II., 418);  
Aboyne; Rannoch.
514. *Septoria eryngii*, Pass. Sacc. Syll. 2883.  
On *Eryngium*. Near Liverpool.

515. *Septoria menyantes*, *Desm.* *Sacc. Syll.* 2887.  
On *Menyanthes trifoliata*. Bungay.
516. *Septoria soldanellæ*, *Berk.* (*Sacc. Syll.* 2888 ?).  
On *Soldanella*. Swansea.
517. *Septoria lysimachiae*, *West.* *Sacc. Syll.* 2890.  
On *Lysimachia*. Darenth (F. B. I., 142 ; II., 31); Lyndhurst; Dee; Argyle.
518. *Septoria veronicæ*, *Desm.* *Sacc. Syll.* 2896.  
On *Veronica*. Shere.
519. *Septoria primulae*, *Buckn.* *Grev.* XVI., 40.  
On *Primula*. Near Bristol.
520. *Septoria convolvuli*, *Desm.* *Sacc. Syll.* 2909.  
On *Convolvulus arvensis*. King's Cliffe; Hermitage; Highgate (F. B. I., 127); Brentford.
521. *Septoria calystegiae*, *West.* *Sacc. Syll.* 2910.  
On *Calystegia sepium*. Lyndhurst; Swansea.
522. *Septoria verbenæ*, *Rob.* *Sacc. Syll.* 2913.  
On *V. officinalis*. Abinger.
523. *Septoria lavandulae*, *Desm.* *Sacc. Syll.* 2914.  
On lavender. Swanscombe (F. B. I., 139).
524. *Septoria lamlicola*, *Sacc. Syll.* 2916.  
On *Lamium*. Swanscombe (F. B. I., 140); Oundle; Forden; Glamis.
525. *Septoria heterochroa*, *Desm.* *Sacc. Syll.* 2917.  
On *Malva*. Neatishead; Shere; Findhaven.
526. *Septoria galeopsidis*, *West.* *Sacc. Syll.* 2923.  
On *Galeopsis*. Abridge.
527. *Septoria stachydis*, *Rob.* *Sacc. Syll.* 2925.  
On *Stachys sylvatica*. Shere; Glamis; Dee; Argyle.
528. *Septoria lycopi*, *Pass.* *Sacc. Syll.* 2928.  
On *Lycopus europæus*. Kew.
529. *Septoria villarsiae*, *Desm.* *Sacc. Syll.* 2933.  
On *V. nymphoides*. Ely.
530. *Septoria virgaureæ*, *Desm.* *Sacc. Syll.* 2960.  
On *Solidago virgaurea*. Darenth (F. B. I., 144 ; II., 419); Gannachy; Argyle.
531. *Septoria doronici*, *Pass.* *Sacc. Syll.* 2972.  
On *D. pardalianches*. Kew.
532. *Septoria centaureæ*, *Roum.* *Sacc. Syll.* 2989.  
On *Centaurea nigra*. Kew.
533. *Septoria Mougéotii*, *Sacc. Syll.* 2998.  
On *Hieracium*. Kew.
534. *Septoria scabiosæcola*, *Desm.* *Sacc. Syll.* 2999.  
On *Scabiosa*. Tunbridge Wells; Highgate; Glasgow; Glen Lochay; Dee; Argyle.
535. *Septoria polygonorum*, *Desm.* *Sacc. Syll.* 3000.  
On *Polygonum*. Stratford-on-Avon; Highgate; Twycross; Tay.

536. *Septoria atriplicis*, *Desm.* *Sacc. Syll.* 3014.  
On *Atriplex*. Bristol.
537. *Septoria urticæ*, *Desm.* *Sacc. Syll.* 3018.  
On nettle. Forden; Neatished; Shere; Highgate (F. B.  
I., 137); Tay; Dee; Clyde; Ross.
538. *Septoria humuli*, *West.* *Sacc. Syll.* 3020.  
On hop. Highgate; Dartford.
539. *Septoria aristolochiæ*, *Sacc.* *Syll.* 3023.  
On *A. clematitis*. Kew.

## C. On fruits.

540. *Septoria Ralfsii*, *B. & Br.* *Sacc. Syll.* 3028.  
On decayed apples. Penzance.

## D. On Monocotyledons.

541. *Septoria tritici*, *Desm.* *Sacc. Syll.* 3042.  
On *Glyceria*. Lyndhurst.
542. *Septoria nodorum*, *Berk.* *Sacc. Syll.* 3044.  
On joints of wheat culms.
543. *Septoria holci*, *Pass.* *Sacc. Syll.* 3052.  
On *Holcus*. Lyndhurst.
544. *Septoria graminum*, *Desm.* *Sacc. Syll.* 3068.  
On leaves of grasses. King's Cliffe; Forden; Abinger;  
Lyndhurst; Forres.
545. *Septoria gracillima* *Cooke.* *Sacc. Syll.* 3072.  
On *Carex*. Near Edinburgh.
546. *Septoria Traillii*, *Cooke.* (Spores 120-130 × 3 m. 6-8 sept.)  
On *Scirpus lacustris*. Aberdeen (Prof. Traill).
547. *Septoria junci*, *Desm.* *Sacc. Syll.* 3087.  
On *J. maritima*. Terrington.
548. *Septoria menispora*, *B. & Br.* *Sacc. Syll.* 3089.  
On *Typha*. Spye Park.
549. *Septoria majanthemi*, *West.* *Sacc. Syll.* 3116.  
On *Smilacina bifolia*. Ken Wood; Hampstead.

## E. On Acotyledons.

550. *Septoria thecicola*, *B. & Br.* *Sacc. Syll.* 3133.  
On capsules of *Polytrichum*. Aberdeen.

GEN. 5. PHLEOSPORA, *Wallr.* (*Piptarthron*, *Mont.*)

Perithecia imperfectly evolved, broadly pierced, subcuticular, formed from the changed substance of the matrix. Sporules fusoid, rod-shaped, thick, 2 or more septate, hyaline.

551. *Phleospora aceris*, *Lib.* *Sacc. Syll.* 3135.  
On maple leaves. Forden; Darenth (F. B. II., 40); King's  
Cliffe; Bangor; Glamis.
552. *Phleospora mori*, *Mont.* *Sacc. Syll.* 3136.  
On mulberry leaves, Clevedon.

553. *Phleospora ulmi*, Fr. Sacc. Syll. 3138.

On elm leaves. Chislehurst; Forden; Shere (F. B. I., 207; II., 29); Hereford; Glasgow; Moray; Tay; Forth; Tweed; Solway; Clyde.

554. *Phleospora oxyacanthæ*, Kunze. Sacc. Syll. 3139.

On hawthorn. Albury (F. B. I., 201); Bungay; Appin; Glamis.

*Fam. 2. NECTRIOIDEÆ*, Sacc. Syll. III., 613.

Perithecia and stroma (when present) fleshy or waxy, brightly coloured, globose, or rarely hysteriform, or somewhat cup-shaped. Sporules various, hyaline.

GEN. 1. *ZYTHIA*, Fr.

Perithecia erumpent or subsuperficial, globose, more or less distinctly papillate, waxy or soft, whitish, rosy, reddish or orange. Sporules ovoid or oblong, continuous, hyaline.

555. *Zythia leucoconia* (B. & Br.), Sacc. Syll. 3298.

On beetroot. King's Cliffe.

GEN. 2. *POLYSTIGMINA*, Sacc.

Stroma growing on leaves, subdiscoid, convexo-plane, rather fleshy, bright reddish, many-celled within. Sporules filiform, continuous, hyaline.

556. *Polystigmina rubra* (Desm.), Sacc. Syll. 3326.

On leaves of *Prunus domestica* and *P. spinosa*. Lampeter; East Bergholt; Bungay; Thirsk.

*Fam. 3. LEPTOSTROMACEÆ*, Sacc. Syll. III., 625.

Perithecia more or less distinctly dimidiate, scutiform, astomous or ostiolate, or splitting longitudinally, membranaceous or carbonaceous, black, erumpent or superficial.

GEN. 1. *LEPTOTHYRIUM*, Kunze.

Perithecia dimidiate, scutiform, membranaceo-carbonaceous, black, astomous, or splitting, then circumscissile. Sporules ovoid-oblong or fusiform, continuous, hyaline.

557. *Leptothyrium periclymeni*, Desm. (pictum, B.), Sacc. Syll. 3330.

On honeysuckle leaves. Twycross; Glamis.

558. *Leptothyrium alneum* (Lev.), Sacc. Syll. 3333.

On alder leaves. Edinbro' (F. B. I., 432); Perth.

559. *Leptothyrium quercinum* (Lasch.), Sacc. Syll. 3340.

On oak leaves. Darenth.

560. *Leptothyrium castaneæ*, Spr. Sacc. Syll. 3341.

On chestnut leaves. Shere; Darenth; Lyndhurst.

561. *Leptothyrium medium*, Cke. Grev. XIII., 98.

On oak leaves. Gomshall.

var. *castaneicola*, *Cke. Grev.* XIII., 98.

On chestnut leaves. Darenth.

562. *Leptothyrium rubi* (*Duby.*), *Sacc. Syll.* 3345.

On bramble leaves. Darenth.

563. *Leptothyrium acerinum* (*Kunze.*), *Sacc. Syll.* 3351.

On *Acer* leaves. Shere; Neatishead,

564. *Leptothyrium asterinum*, *Berk. Sacc. Syll.* 3363.

On *Aster tripolium*. Fleetwood.

565. *Leptothyrium vulgare*, *Fr. Sacc. Syll.* 3370.

On herb stems. Southgate.

566. *Leptothyrium litigiosum*, *Desm. Sacc. Syll.* 3385.

On ferns. Darenth (F. B. I., 335); Westwater; Shrewsbury; Lyndhurst.

GEN. 2. **PIGGOTIA**, *B. & Br. Sacc. Syll.* III., 636.

Perithecia flattened, unequal, thinly membranaceous, at first covered by the very thin cuticle. Sporules oblong or somewhat cylindrical, continuous, hyaline or yellowish.

567. *Piggotia astroidea*, *B. & Br. Sacc. Syll.* 3387.

On elm leaves. Highgate; Stoke Edith; Twycross.

GEN. 3. **MELASMIA**, *Lev. Sacc. Syll.* III., 637.

Perithecia dimidiate, plane, astomous or rimose, membranaceous, black, stroma effused, becoming blackened, often innate. Sporules sausage-shaped, continuous, hyaline.

568. *Melasmia acerina*, *Lev. Sacc. Syll.* 3390.

On maple leaves. Very common.

569. *Melasmia punctata*, *Sacc. Syll.* 3391.

On maple leaves. Norfolk; Roslyn.

GEN. 4. **LEPTOSTROMA**, *Fr. Sacc. Syll.* III., 639.

Perithecia dimidiate, flattened, elongated, black, often shining, more or less splitting in a hysteriform manner. Sporules ovoid-oblong or allantoid, continuous, hyaline.

570. *Leptostroma virgultorum*, *Sacc. Syll.* 3399.

On bramble twigs. Fineshade; Bungay; Weybridge; Barnett; Cotterstock.

571. *Leptostroma scirpinum*, *Fr. Sacc. Syll.* 3427.

On *Scirpus*, &c. Berwick.

572. *Leptostroma caricinum*, *Fr. Sacc. Syll.* 3431.

On *Carices*. Cloud Wood; Glamis.

573. *Leptostroma pteridis*, *Ehr. Sacc. Syll.* 3433.

On *Pteris*.

574. *Leptostroma filicinum*, *Fr. Sacc. Syll.* 3434.

On *Pteris*. Shrewsbury; Highgate (F. B. I., 334); Forde; Appin; Glasgow; Edinbro'; Berwick; Twycross; Darenth; Lyndhurst; Kew.

575. *Leptostroma herbarum*, *Link. Sacc. Syll.* 3436.

On herb stems. Kinross; Berwick.

576. *Leptostroma spirææ*, Fr. Sacc. Syll. 3440.

On *Spiræa ulmaria*. Forden; Southgate; King's Cliffe; Berwick; Perth; Appin; Baldovan.

- GEN. 5. **LABRELLA**, Fr. Sacc. Syll. III., 647.

Perithecia innate, often spurious, black, rounded or unequal, dehiscing with a fissure. Sporules oblong, fusiform, or globose, continuous, hyaline.

577. *Labrella coryli* (Rob.), Sacc. Syll. 3453.

On hazel leaves. Highgate (F. B. I., 154); Swanscombe.

- GEN. 6. **DISCOSIA**, Lib. Sacc. Syll. III., 653.

Perithecia dimidiate, disciform, subsuperficial, soon falling away, black, often shining, astomous or ostiolate, membranaceous. Sporules oblong, allantoid, two or many septate, often three septate, with a cilium at each end, hyaline.

578. *Discosia artocreas* (Tode.), Sacc. Syll. 3485.

On leaves, *Fagus*, &c. Shere; Perth.

579. *Discosia alnea* (Pers.), Sacc. Syll. 3486.

On alder leaves. Appin; Edinbro'.

- GEN. 7. **ACTINOTHYRIUM**, Kunze. Sacc. Syll. III., 658.

Perithecia dimidiate, clypeate, rather fugitive, not, or scarcely gaping, membranaceous, with a radiating fimbriate margin. Sporules filiform, hamate, hyaline.

580. *Actinothyrium graminis*, Kunze. Sacc. Syll. 3507.

On grasses. Shere; Appin.

- GEN. 8. **LEPTOSTROMELLA**, Sacc. Syll. III., 659.

Perithecia covered by the epidermis, then subsuperficial, elongated, depressedly convex, somewhat carbonaceous, black, splitting with a more or less manifest longitudinal fissure. Sporules rod-like or filiform, continuous or septate, hyaline.

581. *Leptostromella juncinum*, Fr. Sacc. Syll. 3516.

On rushes. Norfolk (F.B. I., 433); King's Cliffe; Leicester.

582. *Leptostromella pteridina*, Sacc. Syll. 3517.

On *Pteris*. Shere.

- Fam. 4. **EXCIPULACEÆ**, Sacc. Syll. III., 664.

Perithecia cup-shaped, or patellate, or excipuliform, or hysteriform, at first somewhat spherical, but soon broadly open, membranaceous or carbonaceous, black, erumpent or superficial, smooth or hairy.

- GEN. 1. **EXCIPULA**, Fr. Sacc. Syll. III., 665.

Perithecia innato-erumpent, excipuliform or cup-shaped, membranaceous or rather coriaceous, black, smooth, with an entire orbicular mouth. Sporules oblong or elongated, continuous, hyaline.

583. *Excipula petiolicola*, Fckl. Sacc. Syll. 3526.

On petioles of *Tilia*.



GEN. 2. **DISCULA**, *Sacc. Syll. III.*, 674.

Perithecia disc-shaped, or patellate, often imperfect, covered by the epidermis, which at length splits into teeth. Sporules ellipsoid or oblong, continuous, hyaline or slightly coloured.

584. **Discula platyspora** (*B. & Br.*), *Sacc. Syll.* 3565.

On branches of *Platanus*. Batheaston.

585. **Discula microsperma** (*B. & Br.*), *Sacc. Syll.* 3571.

On twigs of *Salix*.

586. **Discula Desmazierii** (*B. & Br.*), *Sacc. Syll.* 3932.

On branches of *Tilia*. Kew.

GEN. 3. **SPORONEMA**, *Desm. Sacc. Syll. III.*, 677.

Perithecia covered by the epidermis, then erumpent, at first closed, at length splitting into numerous teeth. Nucleus discoid, rather soft. Sporules ovoid or cylindrical, continuous, hyaline.

587. **Sporonema phacidioides**, *Desm. Sacc. Syll.* 3584.

On leaves of *Medicago*.

588. **Sporonema obturata** (*Fr.*), *Sacc. Syll.* 3588.

On ling.

589. **Sporonema strobilinum**, *Desm. Sacc. Syll.* 3590.

On fir and larch scales. Highgate (F. B. I., 341).

GEN. 4. **PSILOSPORA**, *Rabh. Sacc. Syll. III.*, 679.

Perithecia innato-superficial, oblong or unequal, somewhat two-lipped, black, often densely gregarious, on living bark. Sporules ellipsoid or oblong, continuous, hyaline.

590. **Psilospora faginea**, *Rab. Sacc. Syll.* 3594.

On bark of *Fagus*. Epping.

591. **Psilospora quercus**, *Rabh. Sacc. Syll.* 3595.

On oak bark. Lyndhurst; Epping; Leicester.

GEN. 5. **AMEROSPORIUM**, *Speg. Sacc. Syll. III.*, 680.

Perithecia somewhat cup-shaped, setulose. Sporules cylindrically elliptical, not ciliate.

592. **Amerosporium congregatum** (*Cooke*), *Sacc. Syll.* 3598.

On *Euphorbia sylvatica*. Darent.

593. **Amerosporium macrotrichum** (*B. & Br.*), *Sacc. Syll.* 3602.

On branches of *Ulex*.

594. **Amerosporium chæstostroma** (*B. & Br.*), *Sacc. Syll.* 3604.

On ash branches. Somerset.

GEN. 6. **DINEMASPORIUM**, *Lev. Sacc. Syll. III.*, 683.

Perithecia cup-shaped, superficial, black, clad with rigid brown setæ. Sporules oblong or sausage-shaped, continuous, hyaline, ciliate at each end.

595. **Dinemasporium graminum**, *Lev. Sacc. Syll.* 3610.

On grasses. Forden; Northamptonshire.

596. **Dinemasporium strigosum** (*Fr.*), *Sacc. Syll.* 3611.

On culms of grass. Appin.

# Grevillea,

A QUARTERLY RECORD OF CRYPTOGAMIC BOTANY  
AND ITS LITERATURE.

## PRÆCURSORES AD MONOGRAPHIA POLYPORORUM.

(Continued from page 87.)

GEN. IV. **FORIA.** Pers. Syn. p. 542.

Resupinata, effusa, superne porosa. Pileo plerisque obliterato.  
Substantia carnososa, stuposa, coriacea, vel membranacea.

**A. Mollusci.** Pileus late expansus, carnosus, mollis, poris  
plerisque minutis, æqualibus, rotundatis.

\* *Poris persistenter albis.*

† hymenio fatiscente.

946 vulgaris, Fr. Hym. Eur. 578.

947 mollusca, Fr. Hym. Eur. 578.

948 elachista, Berk. in Cke. Syn. Poly. 138.

= minimus, Rav. Grev. i. 65.

949 hyalina, Berk. Fl. Tasm. ii. 255.

950 interna, Schw. Amer. Bor. 469.

951 rivulosa, B. & C. Linn. Journ. x. 318.

952 sassafras, Schw. Amer. Bor. 437.

953 subvincta, B. & Br. Linn. Journ. xiv. 53.

954 hybrida (Sow.), Fr. Hym. Eur. 581.

†† hymenio vix fatiscente.

955 mucida, Pers. Syn. 546.

956 medulla-panis, Pers. Syn. 544.

957 calcea, B. & Br. Linn. Journ. xiv. 55.

958 niphodes, B. & Br. Linn. Journ. xiv. 55.

\*\* *Poris albis, demum ochraceo-pallidis.*

959 vitrea, Pers. Obs. i. 15.

= xylostromeus, Pers. Myc. Eur. ii. 112.

960 hydnophora, B. & Br. Linn. Journ. xiv. 55.

961 tarda, Berk. Hook. Journ. 1845, 56.

- 962 tuberculosa, *Pers. Obs.* i. 14.  
 963 deglubens, *Berk. Hook. Journ.* 1856, 235.  
 964 cremor, *B. & C. Grev.* i. 54.  
 965 lacrymans, *Sauter. Hedwigia.* xv. 150.  
 966 hypolateritia, *Berk. in Herb.* No. 2856.  
 967 subliberata, *B. & C. Linn. Journ.* x. 318.  
 968 fulgens, *Rost. Poly.* iv. t. 63.  
 969 eupora, *Karst. Not. Soc. Fenn.* ix. 360.  
 970 Rostafinskii, *Karst. Fl. Fenn.* iii. 274.  
 971 nitida, *Fr. Hym. Eur.* 574.  
 972 callosa, *Fr. Hym. Eur.* 577.  
 973 obducens, *Pers. Myc. Eur.* ii. 104.

\* \* *Poris flavidis vel aureis.*

- 974 fusco-marginata *Berk. in Herb.* No. 2857.  
 975 attenuata, *Peck. 26th Report*, p. 70.  
 976 parilis, *Fr. Plant. Preiss.* 136.  
 977 Læstadii, *B. & Fr. Grev.* xii. 69.  
 978 crocipora, *B. & C. in Curt. Cat.*  
     = *croceus*, Schw.  
 979 auriculæformis, *Jungh. Ann. Sci. Nat.* 1844, 194.  
 980 vitellina, *Schw. in Fr. Epic.* 483.  
 981 phlebiæformis, *Berk. in Herb.* 2833 (Cuba).  
 982 tegillaris, *Berk. in Herb.* No. 2855.

\*\*\* *Poris carneis.*

- 983 cineta, *Berk. Outl.* 250.  
 984 makraulos, *Rost. Poly.* iv. 55.  
 985 rhodella, *Fr. Hym. Eur.* 573.  
 986 epilintea, *B. & Br. Linn. Journ.* xiv. 55.  
     = *rufo-lateritius*, Kalch. *Grev.* x. 104.  
 987 vineta, *Berk. Ann. Nat. Hist.* 1852, 196.  
 988 hyposclera, *Berk. Grev.* x. 103.  
 989 carneo-pallens, *Berk. Hook. Journ.* 1856, 237.  
 990 roseo-alba, *Jungh. Fl. Java* 43.  
 991 placenta, *Fr. Hym. Eur.* 572.  
 992 rixosa, *Karst. in Thum. Myc. Univ.* 1204.

\*\*\* *Poris rubris.*

- 993 fusco-carnea, *Pers. Myc. Eur.* ii. 97.  
 994 cruentata, *Mont. Syll.* 161.  
 995 juglandina, *Schw. Syn. Car.* 926.  
 996 spissa, *Fr. Elen.* i. 111.  
 997 rufa, *Fr. Hym. Eur.* 573.  
     = *hæmatodes*, *Rost. Poly.* iv. t. 62.

\*\*\* *Poris purpureis violaceisve.*

- 998 atro-vinosa, *Cke. Grev.* x. 131.  
 999 nigro-purpurea, *Schw. Syn. Car.* 925.

\*\*\* *Poris griseis, cinereisve.*  
 \*\*\*\*

- 1000 favillacea, *B. & C. Grev.* i. 53.  
 1001 Salleana, *Berk. in Herb.* No. 2826.  
 1002 cinerea, *Schw. Amer. Bor.* 440.  
 1003 tephropora, *Mont. Syll.* 161.  
     = *surinamensis*, *Mont. Ann. Sci. Nat.* xx. 363.  
 1004 Victoriæ, *Berk. Grev.* x. 103.  
 1005 livida, *Cke. Grev.* x. 131.  
 1006 caryæ, *Schw. Amer. Bor.* 441.  
 1007 gallogrisea, *Berk. in Herb.* No. 2863.  
 1008 Lindbladii, *B. Grev.* i. 54.  
 1009 sarawacensis, *B & Ces. in Herb.* No. 2936.

\*\*\*\* *Poris fuligineis nigrescentibus.*  
 \*\*\*\*

- 1010 niger, *Berk. Hook. Journ.* iv. 304.  
 1011 fuligo, *B. & Br. Linn. Journ.* xiv. 53.  
 1012 ravenalæ, *B. & Br. Linn. Journ.* xiv. 53.  
 1013 luctuosa, *Ces. Fungi Born.*

\*\*\*\*\* *Poris fuscis v cinnamomeis.*  
 \*\*\*\*\*

- 1014 emollita, *Fr. Hym. Eur.* 571.  
 1015 Blyttii, *Fr. Hym. Eur.* 571.  
 1016 Wirtgeni, *Fr. Hym. Eur.* 570.  
 1017 floccosa, *Fr. Hym. Eur.* 572.  
 1018 benetosta, *Berk. Linn. Journ.* xvi. 52.  
 1019 fusco-lutescens, *Fckl. Symb.* 18.

\*\*\*\*\* *Poris ferrugineis v. spadiceis.*  
 \*\*\*\*\*

- 1020 unita, *Pers. Myc. Eur.* ii. 93.  
 1021 sorbicola, *Wein. Fr. Hym. Eur.* 570.  
 1022 Carteri, *Berk. in Herb.* No. 2806.  
 1023 punctata, *Fr. Hym. Eur.* 572.  
 1024 collabens, *Fr. Hym. Eur.* 572.  
 1025 geogena, *B. & C. in Herb. Berk.* 2827.  
 1026 umbrina, *Rost. Poly.* 2i t. 6.  
 1027 ruftincta, *B. & C. in Herb. Kewensis (Cuba).*

**B. Vaporarii.** Pileus late expansus, carnosus, poris inæqualibus, angulatis, vulgo majusculis.

\* *Poris persistenter albis.*

- 1028 radula, *Fr. Hym. Eur.* 578.  
 1029 candidissima, *Schw. Amer. Bor.* 468.  
 1030 papyracea, *Schw. Amer. Bor.* 442.  
 1031 xylostromatis, *Fckl. Supp.* 86.  
 1032 bullosa, *Wein. Ross.* 336.  
 1033 vaporaria, *Fr. Hym. Eur.* 579.  
     = *cellaris*, *Lib. Crypt. Exs.*

- 1034 *salviæ*, *B. & C. Grev.* i. 54.  
 1035 *hibernica*, *B. & Br. Dec. Fungi* No. 1291.  
 1036 *Gordoniensis*, *B. & Br. Dec. Fungi* No. 1023.  
 1037 *Vaillantii*, *Fr. Hym. Eur.* 579.  
 1038 *clathrata*, *B. & C. Grev.* i. 54.  
 1039 *pinguedinis*, *Gaill. ex herb. Desmazieres.*

**\*\* *Poris albido-lutescentibus, vel decolorantibus.***

- 1040 *sanguinolenta*, *Fr. Hym. Eur.* 578.  
 1041 *flavipora*, *B. & C. in Herb. Berk.* 2839.  
 1042 *dentipora*, *Pers. Myc. Eur.* ii. 104.  
 1043 *hians*, *Karst. F. Fenn.* 619.  
 1044 *chrysoloma*, *Fr. Hym. Eur.* 574.  
 1045 *bombycina*, *Fr. Hym. Eur.* 575.  
     = *racodioides*, *Pers. Myc. Eur.* ii. 113 ?  
 1046 *hymenocystis*, *B. & Br. Ann. N. Hist.* 1810.  
 1047 *auricoma*, *Lev. in Herb. Berk.*  
 1048 *aneirina*, *Somm. Lapp.* 276.  
 1049 *ramentacea*, *B. & Br. Ann. Nat. Hist.* No. 1809.  
 1050 *dryina*, *B. & Cke. Grev.* vi. 130.  
 1051 *membranicincta*, *Berk. in Herb.* No. 2909.  
 1052 *metamorphosa*, *Fckl. Symb. Myc. App.* iii. 5.  
 1053 *carbæformis*, *B. & C. Grev.* i. 53.  
 1054 *variecolor*, *Karst. in Thum. Myc. Un.* 1803.  
 1055 *viridans*, *B. & Br. Dec. Fungi* 347.  
 1056 *aprica*, *Berk. Fl. Tasm.* ii. 254.  
 1057 *late marginata*, *Mont. Syll.* 163.  
 1058 *leucolomea*, *Lev. Ann. Sci. Nat.* 1846, 140.  
 1059 *Rennyi*, *B. & Br. Ann. Nat. Hist.* No. 1433.  
 1060 *xantha*, *Fr. Hym. Eur.* 574.  
 1061 *aurantio-pallens*, *B & C. Grev.* i. 53.

**\* *Poris subaureis.***

- 1062 *merulina*, *Berk. Fl. Tasm.* 254.  
 1063 *mellea*, *B. & Br. Linn. Journ.* xiv. 53.  
 1064 *chrysea*, *Lev. Ann. Sci. Nat.* 1846, 301.

**\*\* *Poris carneis v. rubris.***

- 1065 *incarnata*, *Alb. & Schw. Consp.* 250.  
 1066 *micans*, *Ehr. Sylv. Ber.* 30.  
 1067 *porriginosa*, *Berk. in Herb.* No. 2934.  
 1068 *pyrrhopora*, *Mont. Syll.* 162.  
 1069 *salmonicolor*, *B. & C. Grev.* i. 53.  
 1070 *oxydata*, *B. & C. Linn. Journ.* x. 317.

**\*\*\* *Poris purpureis violaceisve.***

- 1071 *violacea*, *Fr. Hym. Eur.* 572.  
 1072 *purpurea*, *Fr. Hym. Eur.* 572.

\*\*\* *Poris cinerascentibus vel nigrescentibus.*

- 1073 Nordmanni, *Lev. in Demid. Voy.* ii. 93, t. 1, f. 1.  
 1074 carbonacea, *B. & C. Linn. Journ.* x. 317.

\*\*\*\* *Poris olivaceis.*

- 1075 chrysobapha, *B. & C. Grev.* i. 53.  
 1076 cerea, *Berk. Hook. Journ.* 1852, 163.

\*\*\*\* *Poris fuscis v. cinnamomeis.*

- 1077 suberis, *Mont. Syll.* 162.  
 1078 superficialis, *Schw. Syn. Car.* 924.  
 1079 disciformis, *Lev. Ann. Sci. Nat.* 1844, 193.

\*\*\*\*\* *Poris ferrugineis v. spadiceis.*

- 1080 portoricensis, *Fr. Epic.* 483.  
 1081 subspadicea, *Fr. Syst. Myc.* i. 378.  
 1082 argillacea, *Cke. Grev.* vii. 1.  
 1083 decolorans, *Schw. Amer. Bor.* 467.

**C. Rigidi.** Pileus effusus, coriaceus, siccus, tenax; poris majusculis, rotundatis subhexagonis vel angulatis, subæqualibus; dissepimentis curtis rigidis.

\* *Poris albis.*

- 1084 leucoplaca, *Berk. Fl. N. Zeal.* ii. 180.  
 1085 corticola, *Fr. Hym. Eur.* 580.

\*\* *Poris albis decolorantibus.*

- 1086 sinuosa, *Fr. Hym. Eur.* 576.  
 1087 rhododendri, *Schw. Am. Bor.* 436.  
 1088 interrupta, *B. & Br. Linn. Journ.*  
 1089 alabamæ, *B. & Cke. Grev.* vi. 130.  
 1090 Beaumontii, *B. & C. in Herb. Berk.* 2919.  
 1091 pulchella, *Schw. Amer. Bor.* 426.  
     = *xanthus*, *Schw. Amer. Bor.* 424.  
 1092 holoxantha, *B. & Cke. in Rav. Amer. Fungi.* No. 213.  
 1093 omæma, *Berk. in Herb.* No. 2837 (U. States).  
 1094 tomentocincta, *B. & Rav. in Herb. Berk.* 2858.  
 1095 xantholoma, *Schw. Amer. Bor.* 435.  
 1096 subaurantia, *Berk. in Herb.* 2859.  
 1097 limitata, *B. & C. Grev.* i. 54 (nec. i. 66).  
 1098 melanoleuca, *Lev. Ann. Sci. Nat.* 1846, 141.

\*\*\* *Poris lignicoloribus vel cervinis.*

- 1099 diversipora, *B. & Br. Linn. Journ.* xiv. 53.  
 1100 cavernulosa, *Berk. Linn. Journ.* 1856, 235.  
 1101 subfusco-flavida, *Rost. Poly.* 27 t. 11.  
 1102 favescens, *Schw. Amer. Bor.* 413.

- 1103 hydnopora, *B. & Glaz. Videns. Med. Kjob.* 1879, 31.  
 1104 hyperborea, *Berk. in Herb. Kewensis* (Arctic America).  
 1105 variolosa, *B. & Br. Linn. Journ.* xiv. 52.

\*\*\* *Poris carneis vel rufis.*

- 1106 anætopora, *B. & C. Linn. Journ.* x. 318.

\*\*\* *Poris flavidis.*

- 1107 chromatica, *B. & Cke. Linn. Journ.* xv. 384.

\*\*\* *Poris fuscis v. cinnamomeis.*

- 1108 lævigata, *Fr. Hym. Eur.* 571.

- 1109 palmicola, *B. & C. Linn. Journ.* x. 317.

- 1110 apposita, *Lev. Ann. Sci. Nat.* 1846, 141.

\*\*\*\* *Poris ferrugineis vel spadiceis.*

- 1111 ferruginosa, *Fr. Syst. Myc.* i. 378.

= *corium*, Kunze in *Herb. Berk.*

- 1112 subiculosa, *Peck 31 Report* 37.

- 1113 contigua, *Fr. Syst. Myc.* i. 378.

- 1114 viticola, *Schw. Amer. Bor.* 423.

- 1115 cryptacantha, *Mont. Ann. Sci. Nat.* v. 369.

- 1116 byssogena, *Jungh. Fl. Java* 43.

- 1117 orbicularis, *Berk. Ann. Nat. Hist.* iii. 324.

D. **Reticulati.** Pileus irregulariter effusus, plerumque incrustans, tenuis, membranaceus. Poris majusculis, distantibus, cupulæformibus, dissepimentis brevissimis subvenulosis.

\* *Poris persistenter albis.*

- 1118 dictyopora, *Cke. Grev.* xii. 17.

- 1119 incrustans, *B. & C. Grev.* i. 54.

- 1120 reticulata, *Fr. Hym. Eur.* 580.

- 1121 calcea, *Schw. Amer. Bur.* 448.

- 1122 farinella, *Fr. Hym. Eur.* 579.

- 1123 collabefacta, *B. & Br. Ann. Nat. Hist.* No. 1432.

- 1124 fatiscens, *B. & Rav. Grev.* i. 65.

- 1125 blepharistoma, *B. & Br. Ann. Nat. Hist.* 1434.

- 1126 leptoderma, *B. & Br. Linn. Journ.* xiv. 54.

\*\* *Poris albis decolorantibus.*

- 1127 arenaria, *Klot. in Fr. Epicr.* 487.

- 1128 tenella, *B. & Cke. Grev.* vi. 81.

- 1129 tenuis, *Schw. Amer. Bor.* 456.

- 1130 cincinnati, *Berk. in Herb. Berk.* 2890.

- 1131 porotheloides, *B. & C. in Herb. Berk.* 2889.

- 1132 xylostromatoides, *Berk. Hook. Journ.* 1843, 638.

- 1133 vesiculosa, *B. & C. Grev.* i. 65.

- 1134 semitincta, *Peck 31st Report*, 37.  
 1135 indurata, *Peck 31st Report*, 37.  
 1136 subgelatinosa, *B. & Br. Ann. Nat. Hist.* 1569.  
 1137 terrestris, *Fr. Hym. Eur.* 576.

\* \* *Poris carneis vel rubris.*

- 1138 pellicula, *Jungh. Fl. Java* 44.  
 1139 Archeri, *Berk. Fl. Tasm.* ii. 255.  
 1140 crustacea, *Lev. Ann. Sci. Nat.* 1844, 193.

\*\* *Poris ferrugineis v. spadiceis.*

- 1141 tenerrima, *B. & Rav. Grev.* i. 65.  
 1142 nebulosa, *B. & C. Linn. Journ.* x. 317.

E. *Species incertæ sedis.*

- 1143 bathypora, *Rost. Poly.* 4 t. 59.  
 1144 epiptelia, *Fr. Mon.* ii. 270.  
 1145 megalopora, *Pers. Myc. Eur.* ii. 88.

N.B.—Corrections, explanations, and additions to these lists are reserved for the next number of this journal.

## FUNGI OF NEW GUINEA.

By M. C. COOKE.

### HYMENOMYCETES.

- Schizophyllum commune*, *Fr.* S. Coast. (*Armit.*)  
*Panus torulosus*, *Fr.* S.E. Coast. (*Armit.*)  
*Lentinus Lecomtei*, *Fr.* S. East Coast. (*Armit.*)  
 " *tener*, *Kl.* S.E. Coast. (*Armit.*)  
 " *calvescens*, *Berk.* S. Coast. (*Armit.*)  
 " *pergamenus*, *Lev.* S.E. Coast. (*Armit.*)  
 " *subnudus*, *Berk.* Strickland River (59).  
 " *inquinans*, *Berk.* Strickland River (60).  
 " *radioatus*, *Cooke.* Strickland River.  
 " *velutinus*, *Fr.* S.E. Coast; Fly River (118); St.  
 George's River; S.E. Coast. (*Armit.*)  
*Lenzites corrugata*, *Kl.* S.E. Coast. (*Armit.*)  
 " *applanata*, *Fr.* Jala River.  
 " *deplanata*, *Fr.* S.E. Coast; St. George's River.  
 " *aspera*, *Kl.* Jala River.  
*Polyporus* (Melan) *elegans*, *Fr.* S. Coast. (*Armit.*)  
 " (Petal) *grammocephalus*, *B.* Strickland River.  
 " (Petal) *russiceps*, *B. & Br.* Strickland River; Fly  
 River.



- Polyporus (Moll.) *verecundus*, *B. & C.* Strickland River.  
 „ (Dichr.) *rubidus*, *B.* S.E. Coast. (*Armit.*)  
 „ (Dichr.) *scruposus*, *Fr.* S.E. Coast. (*Armit.*)  
 „ (Dichr.) *isidioides*, *B.* S.E. Coast. (*Armit.*)  
 „ (Dichr.) *demissus*, *B.* S.E. Coast. (*Armit.*)  
 „ (Hisp.) *cuticularis*, *Fr.* Strickland River.  
 „ (Sub.) *portentosus*, *B.* S.E. Coast. (*Armit.*)  
 „ (Lign.) *auberianus*, *Mont.* Strickland River.  
 „ (Lign.) *zonalis*, *B.* S.E. Coast. (*Armit.*)  
 „ (Lign.) *anebus*, *B.* Strickland River.  
 „ (Lign.) *atypus*, *Lev.* Strickland River.  
 „ (Lign.) *vinosus*, *Berk.* S.E. Coast.  
 Fomes (Mes.) *rugosus*, *Nees.* S.E. Coast. (*Armit.*)  
 „ (Pleur.) *longipes*, *Lev.* Strickland River.  
 „ (Pleur.) *lucidus*, *Fr.* S.E. Coast. (*Armit.*)  
 „ (Pleur.) *superpositus*, *B.* Strickland River.  
 „ (Meris.) *senex*, *Nees.* Strickland River.  
 „ (Foment) *australis*, *Fr.* Strickland River ; S.E. Coast.  
 „ (Foment) *nigrolaccatus*, *Cke.* S.E. Coast.  
 „ (Foment) *fomentarius*, *Fr.* Strickland River.  
 „ (Foment) *scalaris*, *B.* S.E. Coast. (*Armit.*)  
 „ (Foment) *pyrrhocreas*, *Cke.* S.E. Coast.  
 „ (Imp.) *holosclerus*, *B.* S.E. Coast.  
 „ (Imp.) *spadiceus*, *B.* Strickland River.  
 „ (Imp.) *inflexibilis*, *B.* Strickland River.  
 „ (Imp.) *pectinatus*, *Kl.* S.E. Coast.  
 „ (Imp.) *caliginosus*, *B.* S.E. Coast.  
 „ (Imp.) *loricatus*, *P.* Strickland River.  
 „ (Lævi) *connatus*, *Fr.* Strickland River.  
 „ (Lævi) *hemitephrus*, *B.* S.E. Coast.  
 „ (Lævi) *ferreus*, *B.* Strickland River ; Fly River.  
 „ (Lævi) *incrassatus*, *B.* S.E. Coast.  
 „ (Resup.) *bistratosus*, *B. & Cke.* Strickland River.  
 Polystictus (Sacri) *xanthopus*, *Fr.* Strickland River ; Fly River.  
 „ (Disci) *flabelliformis*, *Kl.*  
 „ (Disci) *Adami*, *B.* S.E. Coast.  
 „ (Disci) *nephridius*, *B.* Strickland River ; Fly River.  
 „ (Disci) *affinis*, *Nees.*  
 „ (Disci) *squamæformis*, *B.* S.E. Coast.  
 „ (Disci) *virgineus*, *Fr.* Strickland River.  
 „ (Disci) *microcyclus*, *Lev.* S.E. Coast.  
 „ (Disci) *malaiensis*, *Cke.* Strickland River.  
 „ (Disci) *meleagris*, *B.* Strickland River ; Fly River.  
 „ (Disci) *Hostmanni*, *B.* Strickland River.  
 „ (Disci) *Menziesii*, *B.* Strickland River.  
 „ (Disci) *sanguineus*, *Fr.* St. George's River ; Strickland River.  
 „ (Disci) *russogramme*, *B.*

- Polystictus* (Disci) *rasipes*, *B.* S.E. Coast.  
 „ (Prolif.) *elongatus*, *B.* S.E. Coast.  
 „ (Stup.) *Feei*, *Fr.* Astrolabe.  
 „ (Coria) *pictilis*, *B.* S.E. Coast.  
 „ (Coria) *obstinatus*, *Cke.* Strickland River.  
 „ (Coria) *hirsutus*, *Fr.* St. George's River.  
 „ (Coria) *Persoonii*, *Fr.* St. George's River.  
 „ (Coria) *occidentalis*, *Fr.* S.E. Coast.  
 „ (Coria) *Haskarlui*, *Lev.* Strickland River.  
*Poria* (Vapo) *Lindbladui*, *Berk.* S.E. Coast.  
 „ (Rigidi) *corticola*, *Fr.* Strickland River.  
*Dædalea* *inconcinna*, *Berk.* S.E. Coast. (*Armit.*)  
*Trametes* *Mulleri*, *Berk.* S.E. Coast. (*Armit.*)  
 „ *Sprucei*, *Berk.* S.E. Coast. (*Armit.*)  
 „ *lactinea*, *Berk.* Strickland River (55).  
*Hexagona* *apiaria*, *Fr.* S.E. Coast. (*Armit.*)  
 „ *favoloides*, *Cooke.* Strickland River.  
 „ *polygramma*, *M.* S.E. Coast. (*Armit.*)  
 „ *tenuis*, *Hook.* Strickland River, 34. (*Armit.*)  
*Favolus* *alutaceus*, *B. & M.* Strickland River (21).  
 „ *multiplex*, *Lev.* S.E. Coast. (*Armit.*)  
 „ *Brasiliensis*, *Lev.* S.E. Coast. (*Armit.*)  
*Laschia* *tremellosa*, *Fr.* S.E. Coast. (*Armit.*)  
*Hydnum* (Apus) *luteovirens*, *Ces.* S.E. Coast.  
*Irpex* *flavus*, *Jungh.* S.E. Coast.  
*Cladoderris* *dendritica*, *P.* Strickland River.  
*Thelephora* *lamellata*, *B.* S. Coast. (*Armit.*)  
 „ *regularis*, *Schw.* Strickland River.  
*Lachnocladium* *furcellatum*, *Lev.* Fly River.  
*Stereum* (Mes.) *elegans*, *Fr.* S.E. Coast.  
 „ (Mes.) *Mellisii*, *B.* S.E. Coast.  
 „ (Mes.) *Thozetii*, *B.* S.E. Coast.  
 „ (Mes.) *cyathiforme*, *Fr.* S.E. Coast.  
 „ (Apus) *lobatum*, *Kze.* Fly River ; Strickland River ;  
 Astrolabe ; S. Coast.  
 „ (Apus) *Boryanum*, *Fr.* S.E. Coast.  
 „ (Apus) *involutum*, *Kl.* Fly River ; Strickland River  
 „ (Apus) *bicolor*, *Fr.* S.E. Coast.  
*Hymenochaete* *phaea*, *B.* Strickland River.  
*Corticium* *laeve*, *Fr.* Strickland River.  
 „ *cæruleum*, *Fr.* Strickland River.  
*Dictyonema* *membranacea*, *Ag.* Strickland River ; S.E. Coast.  
*Hirneola* *auricula judæ*, *Fr.* Strickland River.  
 „ *polytricha*, *M.* S.E. Coast.

## GASTEROMYCETES.

- Scleroderma* *bovista*, *Fr.* Strickland River ; S.E. Coast. (*Armit.*)

## MYXOMYCETES.

- Stemonitis* *fusca*, *Roth.* Strickland River.

## DISCOMYCETES.

*Peziza* (*Trichoscypha*) *Hindsii*, *B.* Fly River; Strickland River; S.E. Coast.

## PYRENOMYCETES.

*Xylaria dealbata*, *B. & C.* Strickland River.

„ *allantoidea*, *M.* Strickland River.

„ *involuta*, *Kl.* S.E. Coast. (*Armit.*)

***Lentinus radicans*, Cooke.**

Pileo infundibuliformi, carnosio, rigido, pallido-ochraceo, brevissime velutino, laevi (4-5 unc. diam.). Stipite deorsum incrassato, concolore, velutinoque, solido (4 unc. long,  $\frac{1}{2}$ - $\frac{3}{4}$  unc. lat.), radicato (ad 2 unc. long). Lamellis linearibus, angustis (vix 1 lin.) decurrentibus, confertis, postice lineatis.

On the ground. Strickland River; New Guinea.

***Hexagona favoloides*, Cooke.**

Pileo reniformi, sessili, ochraceo-albo, velutino, subplano (2-3 unc. lat.), postice crassiusculo ( $\frac{1}{2}$  in.), margine subacuto. Hymenio convexo. Poris magnis, hexagonoideis ( $\frac{1}{2}$ - $\frac{1}{4}$  unc. lat.) obtusis, profundis, ad periphericis minoribus.

On wood. Strickland River; New Guinea (No. 20).

## FLORA OF BRITISH FUNGI.

The first volume of the work which we announced two years ago under the above title has just been issued under the name of "*Hymenomycetes Britannici*, British Fungi (*Hymenomycetes*). There are reasons, not far to seek, why we should hesitate to pronounce any opinion on this volume, which, being written for *scholars* rather than for mycologists, omits the following species mostly figured in the 3rd and 4th vols. of "*Illustrations of British Fungi*":—

<i>Agaricus</i> ( <i>Pluteus</i> )	<i>ephebius</i> , <i>Fr. Grev.</i>	xiii, 90,	
		<i>Illust. t.</i>	517
„	„	<i>pellitus</i> , <i>Pers. Grev.</i>	xiv, 37 ... 597
„	„	<i>semibulbosus</i> , <i>Lasch Grev.</i>	xiii, 89 518
„	„	<i>violarius</i> , <i>Massee Grev.</i>	xiii, 89 518
„	„	<i>roseo-albus</i> , <i>Fr. Grev.</i>	xiv, 37... 598
„	„	<i>liquescens</i> , <i>Cooke Grev.</i>	xiv, 121 581
„	( <i>Acetabularia</i> )	<i>acetabulosus</i> ( <i>Sow.</i> ) <i>B. &amp; Br.</i>	
		<i>Ann. N.H.</i> No. 1859.	... 345
„	( <i>Pholiota</i> )	<i>cruentatus</i> , <i>C. &amp; S.</i>	... 502
„	( <i>Inocybe</i> )	<i>incarnatus</i> , <i>Bres. Grev.</i>	xiii, 58... 473
„	„	<i>schistus</i> , <i>Cke.</i>	... 504
„	„	<i>margarispora</i> , <i>B.</i>	... 505
„	„	<i>perbrevis</i> , <i>Weinm. Grev.</i>	xiii, 90 519

Agaricus (Flammula)	clitopilus, Cooke Grev. xiii, 59	500
"	filius, Fr. Ic. Grev. xiii, 45	432
"	ochrochlorus, Fr. Grev. xiv, 37	616
" (Naucoria)	glandiformis, C. & S. Grev. xiii, 59	490
"	arvalis, Sm. Grev. xiii, 59	479
"	latissimus, Cke. Grev. xiii, 60	482
"	porriginosus, Fr.	510
" (Tubaria)	trigonophyllus, Fr.	483
"	pellucidus, Bull	...
" (Crepidotus)	palmaris, Bull, B. & Br. Ann. Nat. Hist. No. 1855	...
"	epigæus, P. Grev. x, 152	516
" (Psalliota)	angustus, Fr. Grev. xiii, 90	521
"	pratensis, Schæff Grev. xiii, 90	525
"	subgibbosus, Fr. Grev. xiii, 91	532
" (Pilosace)	Algeriensis, Fr.	618
" (Stropharia)	coronillus, Bull	535
"	luteo-nitens, Fr.	604
"	spintriger, Fr. W. G. S. in Gard. Chron.	542
"	hypsipus, Fr. Grev xiv, 38	619
" (Hypholoma)	punctulatus, Kalch	587B
"	œdipus, Cke.	587A
" (Psilocybe)	sarcocephalus, Fr. Gard. Chron. Oct. 13, 1883	567, 620
"	subericæus, Fr. Grev. xii, 67	588
"	canofaciens, Cke.	621
" (Psathyra)	pellosporus, Bull Grev. xii, 67	577
"	fatuus, Fr.	595A
"	helobius, Kalch. Grev. xiii, 45	579

Hence there are two subgenera omitted, and 39 species of the genus *Agaricus* with coloured spores. The omissions amongst the white-spored species are far less numerous, and might be the result of accident.

Of the species included there are two which call for special remark—

**Agaricus (Inocybe) echinatus** (Roth), Cooke *Illust. t.* 395.

This species will be found under page 308, as *Agaricus* (Psaliota) *echinatus*, Roth.

We decline to express any opinion here as to which is correct, but probably it will be conceded that *both* are not equally accurate. Any one desirous of forming an opinion should consult Professor Saccardo's exhaustive treatise "Interni all' *Agaricus echinatus* (Roth)" in the "Bulletino della Soc. Veneto Trentina di Scienze naturali in Padova," No. 7, for 1879. In this treatise the author shows satisfactorily that the proper position for this species is in the subgenus *Inocybe*, and his views are generally accepted on the continent.

The other species which finds a place in the above work as—*Agaricus* (*Stropharia*) *obturatus*, Fr. (see page 311), to illustrate which reference must be made to Bresadola's "Fungi Tridentini," part iv-v, pp. 56, whence it is clear that Fries, as in some other instances, failed to appreciate correctly the species figured by Bulliard, and hence the three consecutive *Ag. coronillus*, *Ag. obturatus*, and *Ag. melaspermus* are confused and mixed up. This will be elucidated a little by reproducing Bresadola's observations, as published, leaving "scholars to examine and compare the descriptions in the original language."

**Stropharia melasperma**, Bull. f. 540; Quel. Jur. t. 24, f. 3; Bres. Trent. t. lxi.

Pileus carnosus e convexo planus, subdepressus, mollis, laevis, viscidulus, mox siccus, saepeque epidermide areolato-diffracta, albidus, centro stramineus  $3\frac{1}{2}$ - $4\frac{1}{2}$  cm. latus; lamellæ confertæ, ventricosæ, postice sinuato-adnatæ ex albido violaceo-cinereæ, demum cinereo-nigricantes; stipes albus, farctus, subæqualis, e sericeo-fibrilloso glabrescens, apice striatus 4-6 cm. longus 6-7 mm. crassus; annulus albus, stipiti adhærens, supra dimidium striato-sulcatus, infra laevis, deciduus. Caro pilei alba, stipitis demum substraminea vix odora. Sporæ in cumulo compacto fuscae, sub micr. fusciculæ, ovoides  $10 \times 6$  mmm.; basidia clavata  $22-28 \times 8$  mmm.

Aestate, autumno. Locis herbidis, pascuis etc. raro.

Fungus hicce in Europa boreali haud videtur obvius; nam species, quae sub hoc nomine a Fries in Monogr. i, p. 413, Icon. Select. t. 130, f. 2, et Hymen. Europ., p. 285, describitur et pingitur, nihil aliud est quam *Stropharia coronilla*, Bull. Genuina *Stropharia melasperma*, Bull., neque pileo ochraceo, neque lamellis purpureis gaudet, prouti Fries suum *Ag. melaspermum* describit; hae notae e contra *Ag. coronilla*, Bull., conveniunt, cujus, ut melius in posterum distinguatur, hic novam diagnosim simul cum synonymia exhibemus.

**Stropharia coronilla**, Bull., tab. 597. Quélet Jur. tab. 14, f. 7. *Agaricus phaeosporus*, Fr. Monogr. i, p. 413. *Agaricus melaspermus*, Fr. Hym. Europ. p. 285, No. 1071. Ejusd. Icon. select. ii, p. 30, tab. 130, f. 2. *Ag. coronillus*, Fr. Hymen. Europ. p. 285. *Ag. obturatus*, Kalchbr. Icon. Ung. p. 31, tab. xvii, f. 2. Saccardo Myc. Ven. Spec., tab. iv, fig. 21-23.

Pileus carnosus ex hemisphaerico explanato-convexus, laevis, subviscidus, ochraceo-fulvus, subexpallens, margine primitus albo-floccoso, 3-5 cm. latus; lamellæ confertae, postice sinuato-adnatæ, ex albido purpureo-violaceae, demum nigricantes, acie albida sub lente pruinata; stipes albus e farcto subcavus, fibrillosus, deorsum attenuatus, basi aequali, vel bulbillosa, 4-5 cm. longus, 3-5 mm. crassus; annulus stipiti adhærens, in medio turgide elatus, parte superiore sulcato-plicata, plicis albis, demum e sporis violaceis. Caro alba, odore subraphanoideo praedita. Sporae in cumulo purpureae, sub micr. subrufescentes,  $8-10 \times 5$  mmm.; basidia clavata  $20-40 \times 5-10$ ; cistidia fusioideo-ventricosa apicem versus constricta.

Per annum in herbidis juxta vias in tota regione tridentina frequenter obvius, ut plurimum solitarius.

Hujus speciei iconem non damus, quia jam apud auctores l. c. bene est delineata. Kalchbrenner et Fries recte habitum referunt; Quélet vero etiam annulum optime repræsentat.

As to *Agaricus* (*Clitopilus*) *carneo-albus*, *With* (p. 205) we venture to think that the figures quoted "*Kalchbr. Hung. t. 22, f. 2*," are simply misleading, and do not represent Withering's species at all.

If scholars choose to substitute "*Psaliota*" for *Psalliota*, or prefer "*crustuliniformis*" to "*crustuliniformis*;" and "*alkalinus*" to "*alcalinus*" as Fries wrote it, or to write "*petigenosus*" for "*petiginosus*" the mycologists will not quarrel with them, since all cliques have their idiosyncrasies. But we doubt if zoologists would so readily admit that "*nitella*" is a *squirrel* so long as *Myoxus nitela* can be found in Europe to bear witness in their favour.

For the rest—"Let every man be fully persuaded in his own mind."

## BRITISH FRESH WATER ALGÆ.

(Continued from p. 99).

**Mesotenum de Greyi**, *Turner Naturalist* 1886, 34, t. 1, f. 1.

Frond cylindrical, straight, rarely curved, smooth, elongate; no apparent constriction; not tapering at all towards the ends, which are more or less broadly rounded.

SIZE. 76-104  $\mu$  long  $\times$  20-23  $\mu$  broad.

Blubberhouses Moor.

**Tetmemorus penioides**, *Bennett Journ. Micr. Soc.* 1886, p. 13, t. 2, f. 26.

Frond about the size of *T. granulatus*, 190  $\mu$  long by 47.5 broad, linear elliptic, distinctly notched at each extremity, but without any lip-like process. Margin continuous, with scarcely any constriction. Cell wall not punctated or granulated.

Among *Sphagnum*. Furness Fells, Lancashire.

**Micrasterias cornuta**, *Bennett Journ. Roy. Micr. Soc.* 1886, p. 7, t. 1, f. 6.

Frond oval, very large, 0.355 mm. in length, 0.305 mm. in breadth. The two terminal lobes urn-shaped, very light green, slightly projecting beyond the margin, and quite distinct for their whole length, reaching down to an oval quite colourless piece in the centre; ends of terminal lobes colourless, concave, not dentate or fimbriate. Each quarter with two deep and three less deep incisions. Margin 27.5  $\mu$  wide, perfectly colourless, consisting of six distinct pieces, each with a deep indentation.

Stream between Codale and Stickle Tarns, at an elevation of about 1,800 feet.

**Euastrum ornithocephalum**, Bennett Journ. Roy. Micr. Soc. 1886, p. 9, t. 1, f. 12.

Front minute,  $57\ \mu$  long,  $30\ \mu$  broad. Each frustule with a basal and central rounded lobe and a terminal lobe moderately deeply divided vertically, and with a single projecting tooth, the lobe resembling a bird's head. Sutural division somewhat shallow. Cell wall tuberculated.

Bog pool. Loughrigg.

Near *E. rostratum* and *E. pseudo-elegans*, Turn, but somewhat larger; the terminal lobe resembling that of *E. elegans*.

**Euastrum Lundellii**, Bennett Journ. Roy. Micr. Soc. 1886, p. 9, t. 1, f. 13. *E. binale*  $\gamma$  *elobatum*, Lund. Desm. Suec. p. 23, t. 2, f. 7.

Fronde very minute,  $28\ \mu$  long,  $14\ \mu$  broad, truncately elliptical in outline. Frustule 3-lobed; terminal lobe truncate, gibbous, slightly concave, entire,  $11\ \mu$  broad. Sutural constriction deep. Each frustule with a moderately conspicuous projection in the centre.

Among *Sphagnum*. Loughrigg.

**Cosmarium Wittrockii**, Lund. Desm. Suec. p. 31, t. 3, f. 14. Bennett Journ. Roy. Micr. Soc. 1886, t. 1, f. 15.

Fronde very minute, shape of *C. margaritifera*, but not crenulated, nearly circular in outline,  $25\ \mu$  long,  $22.5\ \mu$  broad; the two frustules slightly unequal; constriction deep; isthmus  $10\ \mu$  broad. Cell wall not punctated, perfectly smooth.

In bog pools. Loughrigg.

**Cosmarium oblongum**, Bennett Journ. Roy. Micr. Soc. 1886, p. 10, t. 1, f. 16. *Cosmarium* sp., Reinsch. Contr. 82, t. 42, f. 3.

Fronde minute,  $55\ \mu$  long,  $22\ \mu$  broad at its broadest part; each frustule elliptical, longer than broad, equally rounded at the base and the apex; isthmus  $11\ \mu$  broad. Cell wall not punctated, perfectly smooth.

Bog pools. Loughrigg.

**Xanthidium spinulosum**, Bennett Journ. Roy. Micr. Soc. 1886, p. 11, t. 2, f. 17.

Fronde moderately large, shape of *X. fasciculatum*; each frustule elliptical or slightly hexagonal,  $80\ \mu$  long by  $40\ \mu$  deep; isthmus  $60\ \mu$ . Each frustule furnished with four pairs of geminate curved spines, about  $25\ \mu$  long; the whole of the rest of the edge ciliated with closely-set spines or teeth, in one specimen about  $12\ \mu$  long, in another specimen much shorter. Endochrome very granular, with a lighter, less granular portion in the centre of each frustule.

Stream between Codale and Stickle Tarns, at an elevation of about 1,800 feet.

**Staurostrum bullosum**, Bennett Journ. Roy. Micr. Soc. 1886, p. 11, t. 2, f. 18-20.

Fronde moderately large; each frustule elliptical, more than twice as long as broad;  $85\ \mu$  long,  $38\ \mu$  wide, triangular in front view, united by a narrow isthmus,  $35\ \mu$  wide. Each frustule with a hemispherical projection, which is very conspicuous, especially on

front view. Frond and projection uniformly verrucose. Both frond and projection fringed with colourless, equidistant, unbranched, subulate spines.

Amongst moss in stream flowing out of Loughrigg Tarn and elsewhere.

**Staurostrum tuberculatum**, *Bennett Journ. Roy. Micr. Soc.* 1886, p. 12, t. 2, f. 24.

Frond moderately large, 70  $\mu$  long by 55  $\mu$  broad; each frustule nearly hexagonal in shape, 37  $\mu$  broad at the apex, 30  $\mu$  at the isthmus; the terminal and upper lateral edges nearly straight or slightly convex, the lower lateral edges concave. The whole margin, except the lower lateral edges, rough with pearly granules, which are larger at the corners. Surface of frond tuberculated.

Bog pool. Loughrigg.

**Staurostrum quadri-spinatum**, *Turner Naturalist* 1886, p. 35, t. 1, f. 4.

Medium size, much longer than broad; frond smooth or lightly punctate; each angle of the segments bearing four stout divergent spines; ends of segments slightly concave; sinus wide, expanding rapidly.

Size. 34  $\mu$  long, 26  $\mu$  broad; isthmus 8  $\mu$ ; spines 10  $\mu$ .

Trelleck Common, Monmouth.

## BRITISH SPHÆROPSIDÆ.

### PROVISIONAL LIST OF SPECIES HITHERTO FOUND IN THE BRITISH ISLANDS.

By M. C. COOKE.

(Concluded from p. 108.)

### MELANCONIÆ, *Berk.*

Without perithecia, nestling beneath the cuticle through which the sporules partly issue in erumpent black or coloured masses or tendrils, sporules various, hyaline or coloured.

#### A. HYALOSPORÆ. Sporules hyaline.

GEN. 1. **GLÆOSPORIUM**, *Desm. Sacc. Syll.* III., 699.

Pustules subcuticular, disciform or pulvinate, at length often erumpent. Conidia ovate-oblong, continuous, hyaline, often oozing out in tendrils or globules.

#### A. On leaves of Dicotyledons.

606. **Glæosporium aquilegiæ**, *Thum. Sacc. Syll.* 3660.  
On *Aquilegia*. Kew.

607. **Glæosporium ficariæ**, *Berk. Sacc. Syll.* 3661.  
On *Ficaria*. Forden.



608. *Glœosporium berberidis*, Cke. *Grev.* XIII., 98.  
On *B. asiatica*. Kew.
609. *Glœosporium concentricum* (*Grev.*), *Sacc. Syll.* 3665.  
On cabbage leaves. Edinbro'; Northamptonshire.
610. *Glœosporium violæ*, B. & Br. *Sacc. Syll.* 3668.  
On *Viola odorata*. Glamis.
611. *Glœosporium Hendersonii*, B. & Br. *Sacc. Syll.* 3673.  
On orange leaves. Milton.
612. *Glœosporium cytisi*, B. & Br. *Sacc. Syll.* 3686.  
On laburnum leaves. Glamis.
613. *Glœosporium fragariæ* (*Lib.*), *Sacc. Syll.* 3690.  
On strawberry leaves. Hampstead (F.B. I., 153); Twycross.
614. *Glœosporium ribis* (*Lib.*), *Sacc. Syll.* 3694.  
On red currant leaves. Twycross; Neatishead (F.B. I., 151); Shrewsbury; Lancashire.
615. *Glœosporium paradoxum*, *De Not.* *Sacc. Syll.* 3697.  
On ivy leaves. Twycross; Den of Airlie; Stratford-on-Avon.
616. *Glœosporium nervisequum* (*Fckl.*), *Sacc. Syll.* 3716.  
On *Platanus*. Holm Lacey.
617. *Glœosporium platani* (*Mont.*), *Sacc. Syll.* 3717.  
On *Platanus*.
618. *Glœosporium tremulæ* (*Lib.*), *Sacc. Syll.* 3719.  
On aspen leaves.
619. *Glœosporium carpini* (*Lib.*), *Sacc. Syll.* 3722.  
On *Carpinus*. Hampstead (F. B. I., 430).
620. *Glœosporium fagi* (*Desm.*), *Sacc. Syll.* 3728.  
On beech leaves. Epping Forest.
621. *Glœosporium umbrinellum*, B. & Br. *Sacc. Syll.* 3731.  
On oak leaves.

B. On fruits of Dicotyledons.

622. *Glœosporium Lindemuthianum*, *Sacc. Syll.* 3747.  
On legumes. Sibbertoft, Suffolk.
623. *Glœosporium fructigenum*, *Berk.* *Sacc. Syll.* 8751.  
On decaying pears. Woodnewton.
624. *Glœosporium læticolor*, *Berk.* *Sacc. Syll.* 3753.  
On peaches, melons, &c. King's Cliffe.
625. *Glœosporium orbiculare*, *Berk.* *Sacc. Syll.* 3759.  
On gourds. King's Cliffe.

GEN. 2. **MYXOSPORIUM**, *Link.* *Sacc. Syll.* III., 722.

Pustules or nuclei nestling beneath the epidermis of trees, soft when moist, pallid or reddish, conidia ovoid, hyaline or pale.

626. *Myxosporium griseum* (*Pers.*), *Sacc. Syll.* 3793.  
On *Corylus*. Hatton.
627. *Myxosporium croceum* (*Pers.*), *Sacc. Syll.* 3804.  
On branches. Carlisle.

628. *Myxosporium dracenicolum*, B. & Br. Sacc. Syll. 3805.  
On *Dracæna*.

GEN. 3. **MYXORMIA**, B. & Br. Sacc. Syll. III., 734.

Pustules circumscribed by densely compacted threads, erumpent almost superficial, disciform or scutellate. Conidia oblong, connected by a narrow isthmus into a chain, hyaline.

629. *Myxormia atroviridis*, B. & Br. Sacc. Syll. 3837.  
On *Aira cæspitosa*. Batheaston.

GEN. 4. **BLOXAMIA**, B. & Br. Sacc. Syll. III., 734.

Pustules minute, almost superficial, truncate, firmer at the base, black, delicate at the apex and pale, and evanescent, hence excipuliform. Conidia catenulate, somewhat cubical, hyaline.

630. *Bloxamia truncata*, B. & Br. Sacc. Syll. 3839.  
On *Ulmus*. Batheaston.

GEN. 5. **CYLINDROSPORIUM**, Ung. Sacc. Syll. III., 737.

Pustules or nuclei subepidermical, white or pallid, disciform or somewhat effused. Conidia filiform, continuous, hyaline, often flexuous.

631. *Cylindrosporium ficiaræ*, Berk. Sacc. Syll. 3848.  
On *Ficaria*. Northamptonshire; Shrewsbury, Highgate (F. B. II., 172).  
632. *Cylindrosporium niveum*, B. & Br. Sacc. Syll. 3849.  
On *Caltha*. New Pitsligo.  
633. *Cylindrosporium ranunculi* (Bon.), Sacc. Syll. 3850.  
On *Ranunculus* and *Caltha*. Lyndhurst.  
634. *Cylindrosporium valerianæ*, Speg.  
On *V. officinalis*. Aberdeen.  
635. *Cylindrosporium rhabdosporum*, B. & Br. Sacc. Syll. 3860.  
On *Plantago*. Glamis.

GEN. 6. **CRYPTOSPORIUM**, Kunze. Sacc. Syll. III., 740.

Pustules or nuclei, discoid conical, covered by the epidermis, erumpent in the centre, sometimes included in a pseudo-perithecium formed from the matrix. Conidia fusiform-falcate, rather large, continuous, hyaline.

636. *Cryptosporium Neesii*, Corda. Sacc. Syll. 3866.  
On alder branches. Easton; Blackheath.  
637. *Cryptosporium amygdalinum*, Sacc. Syll. 3872.  
On hornbeam twigs. Darenth.  
638. *Cryptosporium coronatum*, Fekl. Sacc. Syll. 3876.  
On poplar twigs. Highgate.  
639. *Cryptosporium hippocastani*, Cooke. Grev. XIV., 4.  
On horse chestnut. Kew.

GEN. 7. **LIBERTELLA**, *Desm.* *Sacc. Syll.* III., 744.

Pustules or nuclei of variable form, long, covered by the epidermis, often at length erumpent in bright-coloured tendrils. Conidia filiform, bent, long, continuous, hyaline.

640. **Libertella faginea**, *Desm.* *Sacc. Syll.* 3892.

On *Fagus sylvatica*. Abinger.

641. **Libertella rosæ**, *Desm.* *Sacc. Syll.* 3894.

On rose twigs. King's Cliffe; Berwick; Kew.

642. **Libertella betulina**, *Desm.* *Sacc. Syll.* 3897.

On birch bark. Glamis.

GEN. 8. **NEMASPORA**, *Pers.* *Sacc. Syll.* III., 746.

Pustules or nuclei variable in form, long time covered by the epidermis, bright coloured, rather gelatinous. Conidia sausage-shaped, rather short, continuous, hyaline, often expelled in tendrils.

643. **Nemaspora microspora**, *Desm.* *Sacc. Syll.* 3910.

On branches. Highgate; Mickleham.

GEN. 9. **MARSONIA**, *Fisch.* *Sacc. Syll.* III., 767.

Pustules always or for a long time covered by the cuticle, globose-discoid, pallid. Conidia ovoid or oblong, uniseptate, hyaline.

644. **Marsonia populi** (*Lib.*), *Sacc. Syll.* 4024.

On poplar leaves. Rushton.

645. **Marsonia juglandis** (*Lib.*), *Sacc. Syll.* 4028.

On walnut leaves. Neatishead; Fern.

646. **Marsonia potentillæ** (*Desm.*), *Sacc. Syll.* 4037.

On *Potentilla* leaves.

## B. PHÆOSPORÆ. Sporules coloured.

GEN. 10. **MELANCONIUM**, *Link.* *Sacc. Syll.* III., 749.

Pustules or nuclei subcutaneous, conical or disciform, black. Conidia acrogenous, globose then oblong, continuous, sooty brown, at length erumpent in black masses or tendrils, staining the matrix.

647. **Melanconium magnum** (*Grev.*), *Sacc. Syll.*, 3946.

On walnut branches. Gopsall.

648. **Melanconium elevatum**, *Corda.* *Sacc. Syll.* 3950.

On oak branches. Langridge.

649. **Melanconium sphæroideum**, *Link.* *Sacc. Syll.* 3959.

On alder. Kew; Forden.

650. **Melanconium bicolor**, *Nees.* *Sacc. Syll.* 3963.

On bark of *Betula*, *Carpinus*, *Quercus*. Hermitage; Kew; Thorney; Hampstead.

651. **Melanconium betulinum**, *Sch. & K.* *Sacc. Syll.* 3955.

On bark of *Betula alba*. Twycross.

652. **Melanconium sphærospermum** (*Pers.*), *Sacc. Syll.* 3989.

On reeds. Tansor.

GEN. 11. **CRYPTOMELA**, *Sacc. Syll.* III., 760.

Pustules or nuclei subcutaneous or at length erumpent, black, minute. Conidia fusoid, often curved, black.

653. **Cryptomela caricis** (*Corda*), *Sacc. Syll.* 3992

On *Carices*. Orton; Spye Park.

GEN. 12. **CHEIROSPORA**, *Fr.* (*Thyrsidium*, *Mont.*), *Sacc. Syll.* III., 761.

Stroma gelatinous, subcortical, covered by the epidermis, at length by its rupture erumpent, inky black, basidia branched, hyaline, radiating. Conidia globose, concatenate, dingy olive, agglomerated in terminal subglobose heads.

654. **Cheirospora hedericola** (*Not.*), *Sacc. Syll.* 3998.

On ivy. Highgate; Kew; King's Lynn; Eastbourne.

655. **Cheirospora botryospora**, *Fr.* *Sacc. Syll.* 3999.

On beech. Bristol; Batheaston; Weybridge.

GEN. 13. **DIDYMOSPORIUM**, *Nees.* *Sacc. Syll.* III., 763.

Pustules globose or oblong, soon erumpent. Conidia oblong or fusoid, uniseptate, brown or sooty, often shortly stipitate.

656. **Didymosporium profusum**, *Grev.* *Sacc. Syll.* 4009.

On *Fagus* and *Acer*. Scotland.

(We have never yet seen septate conidia in original specimens.)

GEN. 14. **STILBOSPORA** (*Pers.*), *Sacc. Syll.* III., 771.

Pustules subcutaneous, conoid or disciform, black. Conidia oblong or fusoid, 2 or many septate, sooty brown, at length expelled in tendrils.

657. **Stilbospora thelebola**, *Sacc. Syll.* 4042.

On *Alnus*.

658. **Stilbospora angustata**, *Pers.* *Sacc. Syll.* 4045.

On *Carpinus*. Northamptonshire.

659. **Stilbospora macrosperma**, *Pers.* *Sacc. Syll.* 4046.

On oak branches. Thringstone; Bergholt; Appin; Elmstead.

GEN. 15. **CORYNEUM**, *Nees.* *Sacc. Syll.* III., 774.

Pustules disciform or pulvinate, subcutaneous then erumpent, black, compact. Conidia oblong or fusoid, 2 or many septate, sooty brown, never expelled in tendrils.

[*Coryneum Beyerinckii*, *Oud?*]

660. **Coryneum microstictum**, *B. & Br.* *Sacc. Syll.* 4059.

On *Rosa*, *Rubus*, &c. Bristol; Batheaston; Glamis.

661. **Coryneum cistinum**, *Cooke.* *Grev.* XIV., 5.

On *Cistus laurifolius*. Kew.

662. **Coryneum macrospermum**, *B. & Br.* *Sacc. Syll.* 4066.

On *Alnus*.

663. **Coryneum compactum**, *B. & Br.* *Sacc. Syll.* 4068.

On *Ulmus*. Wraxall.

664. **Coryneum umbonatum**, *Nees.* *Sacc. Syll.* 4070.

On *Ulmus* and *Quercus*. Kew.

665. **Coryneum pulvinatum**, Kunze. *Sacc. Syll.* 4071.  
On *Tilia*, &c. Twycross; Burleigh Park.
666. **Coryneum Kunzei**, Corda. *Sacc. Syll.* 4074.  
On *Quercus*. Rudloe; Ross; Penzance; Blackheath; Chislehurst.  
var. **Salicis**.  
On *Salix Smithiana*. Kew.
667. **Coryneum disciforme**, Kunze. *Sacc. Syll.* 4075.  
On *Tilia*, *Quercus*, and *Betula*. Wiltshire; Highgate.
668. **Coryneum Notarisianum**, Sacc. *Syll.* 4076.  
On *Betula papyrifera*. Kew.

GEN. 16. **SCOLECOSPORIUM**, Lib. *Sacc. Syll.* III., 782.

Pustules subcutaneous, then erumpent, pulvinate, compact, black. Conidia fusoid, sooty brown, many septate, attenuated at the apex into a curved pale beak.

669. **Scolecosporium fagi**, Lib. *Sacc. Syll.* 4094.  
On *Fagus*. Northamptonshire; North Wootton; Weybridge.

GEN. 17. **ASTEROSPORIUM**, Kunze. *Sacc. Syll.* III., 782.

Pustules pulvinate, erumpent, black. Conidia stellately lobed, brown, lobes attenuated outwards, many septate.

670. **Asterosporium Hoffmanni**, Kunze. *Sacc. Syll.* 4095.  
On *Fagus*, *Betula*, &c. Highgate; King's Cliffe; Wansford; Kew; Weybridge; Abinger; Shere.

GEN. 18. **PESTALLOZZIA**, DeNot. *Sacc. Syll.* III., 784.

Pustules subcutaneous, afterwards erumpent, disciform or pulvinate, black. Conidia oblong, 2 or many septate, coloured, very rarely hyaline, apex hyaline, bearing one or many cilia. Basidia hyaline.

671. **Pestalozzia funerea**, Desm. *Sacc. Syll.* 4135.  
On *Coniferae*, &c. Hatton; Stratford-on-Avon.
672. **Pestalozzia Guelpini**, Desm. *Sacc. Syll.* 4146.  
On *Camellia* and *Rhododendron*. Kew; Milton; Forden; Rugby.
673. **Pestalozzia lignicola**, Cooke. *Sacc. Syll.* 4147.  
On chips.

GEN. 19. **STEGANOSPORIUM**, Corda. *Sacc. Syll.* III., 803.

Pustules subcutaneous, at length erumpent, black, pulvinate, compact. Conidia solitary (not concatenate), ovoid or pear-shaped, 2 or many septate, and muriform.

674. **Steganosporium pyriforme** (Hoffm.), Sacc. *Syll.* 4195.  
On bark. King's Cliffe; Twycross; Jedburgh; Coed Coch; Oundle.
675. **Steganosporium cellulosum**, Corda. *Sacc. Syll.* 4200.  
On bark of *Tilia*. Weybridge; Forden; Kew.

## SOME EXOTIC FUNGI.

(Continued from p. 90.)

**Agaricus (Naucoria) acutus, Cooke.**

Pileo carnosio, conico-campanulato, acuto umbonato, glabro, lævi, opaco, ochraceo (3.5 mm. lat.); stipite gracili, fistuloso (1 unc. long,  $\frac{1}{2}$  mm. crass.), adpresse fibrilloso, æquali, albido-flavescente; lamellis adnatis, subconfertis, lutescenti-cinnamomeis, acie pallidiore.

On rotten logs. New Zealand (Colenso 48, 88).

Allied to *Agaricus camerinus* and *Ag. triscopus*.

**Hydnum (Resupinatum) tabacinum, Cooke.**

Subiculo effuso, adnato, tomentoso, subferrugineo; aculeis subconfertis, crassiusculis, rigidis, conicis, acutis, farinaceo-pulverulentibus, concoloribus.

On rotten logs. New Zealand (Colenso 150).

Allied to *H. Weinmanni* and *H. ferruginosum*, but with stouter and more rigid teeth. The subiculum fibrous, somewhat woolly at the margin.

**Cyphella filicola, Cooke.**

Albida; cupulis subdiscoideis, concavis (1 mm. lat.) lævibus, glabris, subtus marginali affixis, latero altero incurvis, margine integro, vel bicuspidato; sporis ellipticis, hyalinis ( $0.12 \times 0.04$  mm.).

On fronds of *Hymenophyllum*. New Zealand (Dr. Ralph). Napier, New Zealand (Colenso 80).

On *Adiantum*. Walhalla, Gipps Land (Tisdale 28).

**Coleosporium Fuchsiae, Cooke.**

Epiphyllum. Maculis parvulis, ochraceo-fuscis, angulatis vel confluentibus; soris gregariis, erumpentibus, demum epidermide rupta cinctis. Conidiis ovalibus ( $30-40 \times 20-22 \mu$ ) verrucosis, aurantio-fuscis.

On living leaves of *Fuchsia excorticata*. New Zealand (Kirk 268).

**Septoria coprosmae, Cooke.**

Maculis orbicularibus, minutis, pallidis, nigro-limitatis; peritheciis paucis, semi-immersis, atris, pertusis; sporulis cylindraceis, flexuosis, obsolete guttulatis, hyalinis ( $30 \times 2 \mu$ ).

On fading and dead leaves of *Coprosma*. New Zealand (Colenso 336).

**Leptothyrium panacis, Cooke.**

Peritheciis gregariis, vel sparsis, punctiformibus, scutiformibus, membranaceis, orbicularibus, atro-fuscis. Sporulis minutis, cylindraceis, rectis vel leniter curvulis, hyalinis ( $7 \times 2 \mu$ ).

On upper face of fading leaves of *Panax arboreum*. New Zealand (Colenso 341).

Chiefly on the midrib and principal veins.

**Cylindrosporium nanum**, Cooke.

Hypophyllum. Maculis angulatis, nervulis limitatis, canescentibus, acervulis minutis, albidis, conidiis, cylindraceis, rectis, hyalinis, denique emergenti-superficialibus ( $8-10 \times 1 \mu$ ).

On living leaves of *Juglans*. New Zealand (Kirk 254).

Allied to *C. microspermum*, Speg.

**Ovularia malorum**, Cooke.

Hypophylla. Maculis effusis, confluentibus, albidis, subfari-nosis, hyphis brevibus, conidiis ellipticis, hyalinis ( $10-12 \times 4-5 \mu$ ).

On living leaves, petioles, &c., principally young shoots of apple. New Zealand (Kirk 271, 272).

**Sphaerella Weinmannia**, Cooke.

Epiphylla. Peritheciis gregariis, subglobosis, atris, semi-immersis, punctiformibus, pertusis. Ascis clavatis. Sporidiis lanceolatis, uniseptatis ( $0.15-0.18 \times 0.04$  mm.) hyalino-luteolis.

On dead leaves of *Weinmannia racemosa*. New Zealand (Colenso 215).

**Asterina reptans**, B. & C.

Stylospores; cylindrical, slightly curved, almost linear ( $10 \times 1 \mu$ ), hyaline.

This condition would fall into the *Leptostromaceae* perhaps as a species of *Leptothyrium* rather than *Melasmia*, to either of which it is allied.

Common on various coriaceous leaves, such as *Panax*, *Knightia*, &c. New Zealand (Colenso).

## SACCARDO, SYLLOGE FUNGORUM, VOL. IV.

The fourth volume of Professor Saccardo's book has just come to hand, including the Hyphomycetes. Undoubtedly this was the most critical and difficult of any of the sections with which our author has been called upon to deal, and we venture to think that, on the whole, he has achieved as much success as he could have hoped for. Only by practical test of experience will its real value be determined.

This volume enumerates 3,583 species, which are classed under four families—1, *Mucedineae*, or the white moulds; 2, *Dematiaceae*, the black moulds; 3, *Stilbeae*, of which the old genus *Stilbum* is the type; and, 4, *Tuberculariaceae*, including such verruciform genera as *Tubercularia*. This arrangement, so far, indicates no new departure, and, we think, will commend itself as the best course which could have been adopted.

It would be manifestly unjust to venture any observations of a critical nature upon a work which has been before us but

a few hours. It may be that, upon closer acquaintance with the details, we may be able to trace species of which we find at present no indication in the "Index." Under any circumstances this has been a weakness in the work, that the Index is very far from perfect, and we fear, from one or two trials, that where former volumes were weak the present is not strong. Nevertheless, although it is quite possible that in some instances we shall not feel disposed entirely to agree with Professor Saccardo when we come to use the book for working purposes, we take no exception to the arrangement he has adopted, or the general manner in which he has carried it out, unless it be here and there a suspicion of more genera than seem to be necessary.

A singular typographical error in the heading of the pages, commencing at page 239 and continued for fifty pages, is very misleading, and should have been avoided in a work of this kind, where so much depends on ready reference.

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### COOKE'S HERBARIUM OF FUNGI.

The whole of M. C. Cooke's extensive Herbarium of Fungi has been acquired for the nation, and has been transferred to the Herbarium of the Royal Gardens at Kew, where it is in close proximity to the Herbarium of the Rev. M. J. Berkeley, which it even exceeds in numerical extent. It will be a source of gratification to mycologists that these two, the largest and most complete collections of Fungi ever made in this country, should have become public property, and may hereafter be consulted by Botanists from all parts of the world. The Herbarium of the Rev. M. J. Berkeley will be maintained distinct, but the other is in course of incorporation with the General Herbarium of Fungi.

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### FIGURES OF CORTINARIII.

A good opportunity now presents itself for mycologists who are specially interested in the species of the large and difficult genus *Cortinarius*, to commence taking the "Illustrations of British Fungi" from part 42 onwards, by which means they will obtain figures of *Coprinus* and *Cortinarius*. Those for whom the entire work may appear too extensive and expensive, may obtain this portion, which will not exceed a single volume, and thus far it will be complete in itself, although the plates are numbered consecutively in continuation from the earlier portion of the work. Good figures are indispensable for the successful study of the species of this large genus, which will commence with part 44, as *Coprinus* commences with part 42, and occupies two parts.



## NEW BRITISH FUNGI.

(Continued from p. 90.)

**Haplographium bicolor**, *Grove Sci. Goss.*, Sept. 1885, figs. 127, 128.

Stems effused, gregarious, occasionally two or three connate at the base, erect, straight,  $\frac{1}{2}$ - $\frac{1}{3}$  mm. high, rigid, blackish-brown, opaque, paler and rounded above, bulbous below; head pale, honey-coloured, obovate, the lower part composed of dense persistent radiating, twice penicillately branched threads; spores, oblong or ovate, hyaline, subacute (4-5  $\mu$  long).

On rotting wood. Birmingham. (W. B. Grove.)

**Saccharomyces glutinis** (Fries). *Cohn. Beitr.* 1., 187.

Cells round, oval, oblong, elliptic, to shortly cylindrical, 5-11  $\mu$  long, about 4  $\mu$  broad, isolated or united in twos, seldom more together. Cell membrane and contents colourless when fresh, but when moistened again after drying with a faintly reddish central nucleus.—*Grove Synopsis*, p. 63, fig. 66.

On leaves, petioles, and bulbs of *Eucharis*, Sutton Coldfield (W. B. G.). On *Eucharis subdentata* and *Hymenocallis adnata*. Kew Gardens.

**Ovularia Doronici**, *Sacc. Mich.* II., 638.

Hypophyllous, somewhat effused, whitish. Threads rather fasciculate, erect, 30-40  $\times$  3, continuous, hyaline, shortly branched above or denticulate; conidia oblong or subfusoid (? cylindrical), often catenulate, rather acute at each extremity, 12-15  $\times$  4-5, hyaline.

On living leaves of *Doronicum*. Forres. (Rev. J. Keith.)

The Scotch specimens differ in the conidia, being more accurately described as cylindrical and narrower. 12-15  $\times$  2-3  $\mu$ .

**Septoria adoxæ**, *Fckl. Symb. App.* II., 21.

Perithecia, scattered or subgregarious, sometimes seated on bleached spots, at length free, black, obtusely conical, flattened at the base, minute; ostiolum obtuse, perforate; sporules cylindrical, often straight, 2-3 celled, hyaline, 32-36  $\times$  4  $\mu$ , hyaline.—*Sacc. Syll.* III., 543, No. 2945.

On leaves of *Adoxa*. Forres. (Rev. J. Keith.)

**Ramularia adoxæ**, (*Rabh.*), *Sacc. Syll.* IV., 206.

Tufts on the under surface, punctiform and confluent, whitish or hoary, threads simple, slightly denticulate, 45-60  $\times$  3-4  $\mu$ , hyaline, conidia cylindrical, rod-shaped or elongated, fusiform, simple (? one to three septate), 15-33  $\times$  4-6  $\mu$ . *Fusidium adoxæ*, *Rabh.* in *Herb. Myc.* II., No. 598.

On living leaves of *Adoxa*. Forres. (Rev. J. Keith.)

This can hardly be different from *Ramularia adoxæ*, *Sacc. Syll.* IV., 206, which is said to have simple conidia, whereas in our specimens they are 1-3 septate.

- Oospora rosella**, *Grove Journ. Bot.*, 1885, 163.  
On horse dung. Edgbaston.
- Oospora candidula**, *Sacc. Fungi Ital.*, 1880. *Grove Journ. Bot.*, 1885, 163.  
On *Tubercularia vulgaris*, &c. Sutton.
- Oospora fusca**, *Grove Journ. Bot.*, 1885, 163.  
On *Bulgaria inquinans*. Sutton.
- Fusidium viride**, *Grove Journ. Bot.*, 1885, 164.  
On dead stems of *Heracleum*. Bradnock's Marsh.
- Cephalosporium acremonium**, *Corda Ic. III.*, t. 2, f. 29. *Grove Journ. Bot.*, 1885, 164.  
On stems of *Rubus*, *Heracleum*, and on rotting wood.
- Aspergillus spiralis**, *Grove Journ. Bot.*, 1885, 164.  
On phial cork. Birmingham.
- Gliocladium penicilloides**, *Corda Ic. IV.*, f. 92. *Grove Journ. Bot.*, 1885, 164.  
On hymenium of old *Stereum*. Trickley coppice.
- Spicaria elegans**, *Harz. Hypho.*, 51. *Grove Journ. Bot.*, 1885, 165.  
On dead moss and rotting wood. Sutton.
- Dactylella rhombospora**, *Grove Journ. Bot.*, 1885, 166, t. 257, f. 4.  
On rotten wood. Selly Oak.
- Hyalopus ater**, *Corda Ic. IV.*, 89. *Grove Journ. Bot.*, 1885, 166.  
On decayed wood. Sutton.
- Haplographium bicolor**, *Grove Journ. Bot.*, 1885, 167.  
On rotten wood. New Park, Middleton.
- Chalara longissima**, *Grove Journ. Bot.*, 1885, 167, t. 257, f. 8.  
On rotten wood. Trickley Coppice.
- Diplococcium spicatum**, *Grove Journ. Bot.*, 1885, 167, t. 257, f. 7.  
On rotten wood. Sutton.
- Helminthosporium cylindricum**, *Corda in Sturm. XI.*, t. 11. *Grove Journ. Bot.*, 1885, 168.  
On dead wood. Twycross (*Bloxam*), Witton. (*W. B. G.*)
- Helminthosporium inconspicuum**, *C. & E. Grev. VI.*, 88, t. 99, f. 19.  
var. *Britannicum*. *Grove Journ. Bot.*, 1885, 168.  
On grasses. Salford Priors.
- Acrothecium tenebrosum**, *Sacc. Mich. I.*, 74. *Grove Journ. Bot.*, 1885, 168.  
On dead wood. Kenilworth, Sutton.
- Pachnocybe clavulata**, *Grove Journ. Bot.*, 1885, 168, t. 256, f. 10.  
On rotten wood. Hampton in Arden.
- Epicoccum granulatum**, *Penz. F. Agr.* *Grove Journ. Bot.*, 1885, 169.  
On culms and sheaths of *Dactylis*. Three Shire Oak.

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WOOLHOPE CLUB FORAY.—The annual Foray is fixed this year to take place at Hereford, on Thursday, October 7th.

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APPENDIX, containing revised diagnoses of the Hymenomycetes in "Cooke's Handbook" to accompany the "Illustrations" paged separately, in continuation, pp. 113 to 144.

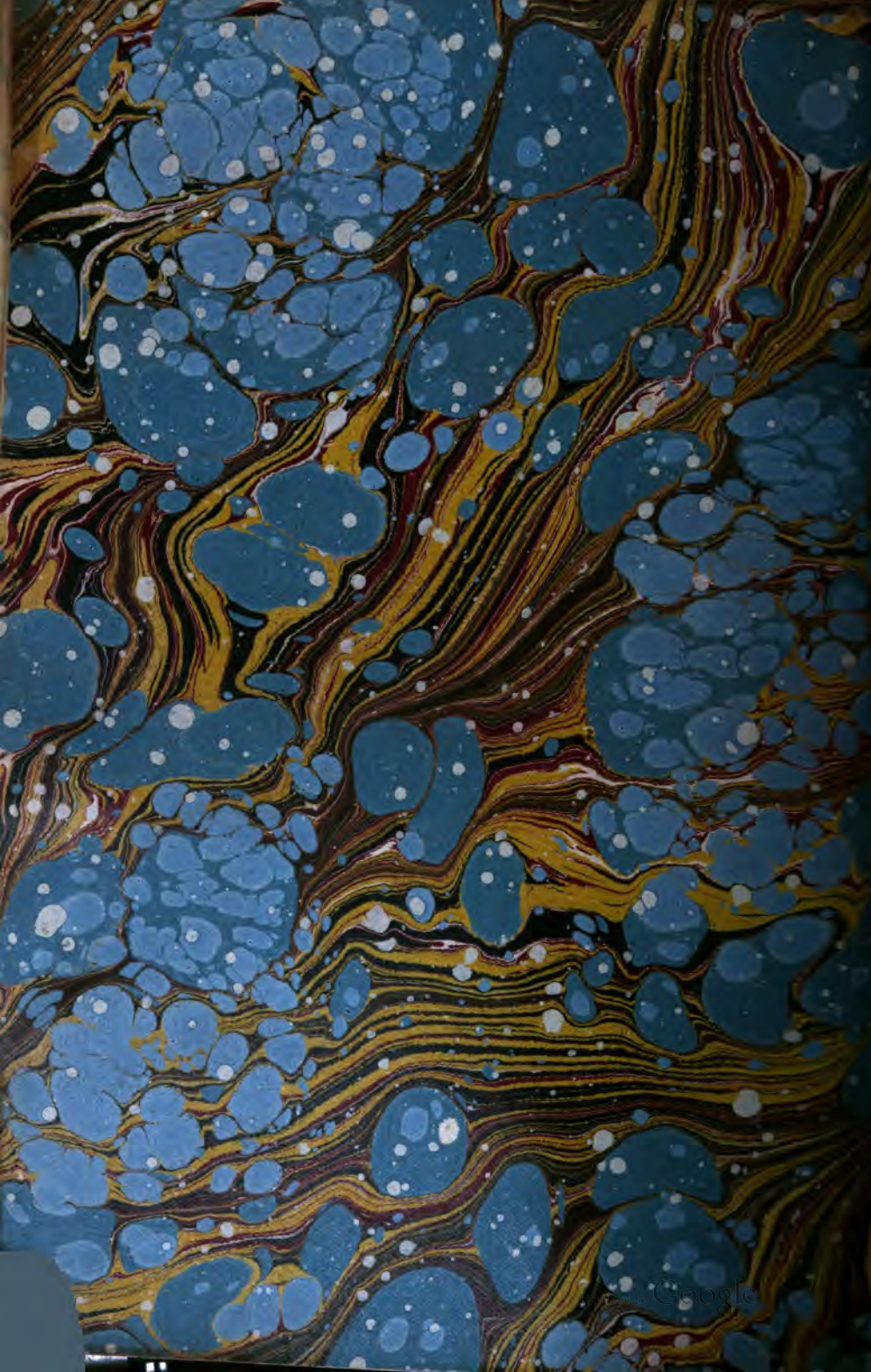
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